

THE TRAUMATIC
NEUROSES OF WAR

BY

ABRAM KARDINER, M.D.

FORMERLY ATTENDING SPECIALIST
U. S. VETERANS HOSPITAL NUMBER 81

FORMERLY INSTRUCTOR IN PSYCHIATRY
CORNELL UNIVERSITY

AND

ASSOCIATE IN PSYCHIATRY
COLUMBIA UNIVERSITY

• 1941 •

PUBLISHED WITH THE SPONSORSHIP OF THE
COMMITTEE ON PROBLEMS OF NEUROTIC BEHAVIOR
DIVISION OF ANTHROPOLOGY AND PSYCHOLOGY
NATIONAL RESEARCH COUNCIL, WASHINGTON, D.C.

PSYCHOSOMATIC MEDICINE

EXPERIMENTAL AND CLINICAL STUDIES

Published quarterly (on a cooperative, non-profit, non-salary basis) with the sponsorship of the NATIONAL RESEARCH COUNCIL, Division of Anthropology and Psychology, Committee on Problems of Neurotic Behavior:—

Walter R. Miles, Chairman
Thomas M. French
R. G. Hoskins

Walter S. Hunter
Howard S. Liddell
William Malamud

Ex-Officio { Robert E. Coker
Carl E. Guthe
Esmond R. Long

PURPOSE: The aim of PSYCHOSOMATIC MEDICINE, which has been initiated with the assistance of the Josiah Macy, Jr. Foundation, is to encourage and bring together studies which make a contribution to the understanding of the organism as a whole, in somatic and psychic aspects. These materials are now usually separated widely in manner and place of publication because of differences in concept, approach and methods. The inauguration of this journal will provide a channel for the prompt and inexpensive publication of relevant investigations. (See inside back cover for explanatory note.)

SCOPE: The investigations published in this journal will deal primarily with phenomena observed concurrently from somatic and psychic angles rather than from either one alone. The scope therefore will include appropriate experimental studies of animal and human behavior, and well-controlled clinical studies of both children and adults. Pertinent examples are: investigations of experimental neuroses, of frustration, of physiological changes accompanying emotion, of vegetative and hormonal disturbances, and of psychiatric aspects of general and specific medical problems.

THE JOURNAL WILL INCLUDE REVIEWS OF RELEVANT LITERATURE IN THE FIELD OF THE MEDICAL AND RESEARCH SPECIALTIES.

MONOGRAPH SUPPLEMENTS: Monograph supplements will meet the increasing need in this field for publication of experimental data resulting from longer studies.

MANUSCRIPTS: All correspondence relative to the publication of articles should be addressed to Dr. Flanders Dunbar, Managing Editor, Academy of Medicine Building, 2 East 103rd Street, New York City.

REVIEWS: The Journal will publish reviews of articles and books relating to its field, and summaries by specialists, of the relevant literature in their respective fields of investigation or clinical observation. Authors and publishers wishing to submit reviews or material for review should address the Managing Editor, Academy of Medicine Building, 2 East 103rd Street, New York City.

SUBSCRIPTIONS: PSYCHOSOMATIC MEDICINE is issued quarterly (annual volume about 500 pages). Annual subscriptions for one year \$5.00, for two years \$9.00 (outside U. S. and Canada: for one year \$5.50; for two years \$10.00), single copies \$1.75. The *Monograph Supplements* (usually totaling approximately 500 pages) for one year \$4.50, for two years \$8.50 (outside U. S. and Canada: for one year \$5.00, for two years \$9.50), single copies \$1.00 to \$3.00.

Club subscription: PSYCHOSOMATIC MEDICINE and Monograph Supplements, for one year \$8.50; for two years \$15.50 (outside U. S. and Canada: for one year \$9.50; for two years \$16.50).

Special for medical students, interns, and residents: PSYCHOSOMATIC MEDICINE for one year \$3.75; Monographs for one year \$3.00. ALL PRICES IN U. S. CURRENCY.

BUSINESS CORRESPONDENCE: All correspondence relating to business matters and subscriptions should be addressed to Psychosomatic Medicine, 450 Ahnaip Street, Menasha, Wisconsin, or to the Division of Anthropology and Psychology, National Research Council, 2101 Constitution Avenue, Washington, D.C., and checks should be made payable to the National Research Council.

Entered as second-class matter May 2, 1939, at the post office at Menasha, Wisconsin, under the Act of March 3, 1879.

Copyright, 1941, by NATIONAL RESEARCH COUNCIL

PSYCHOSOMATIC MEDICINE MONOGRAPH II - III

THE TRAUMATIC
NEUROSES OF WAR

COPYRIGHT, 1941, BY NATIONAL RESEARCH COUNCIL
2101 CONSTITUTION AVENUE, WASHINGTON, D.C.

PSYCHOSOMATIC MEDICINE MONOGRAPH II - III

THE TRAUMATIC
NEUROSES OF WAR

BY

ABRAM KARDINER, M.D.

FORMERLY ATTENDING SPECIALIST
U. S. VETERANS HOSPITAL NUMBER 81

FORMERLY INSTRUCTOR IN PSYCHIATRY
CORNELL UNIVERSITY

AND

ASSOCIATE IN PSYCHIATRY
COLUMBIA UNIVERSITY

• 1941 •

PUBLISHED WITH THE SPONSORSHIP OF THE
COMMITTEE ON PROBLEMS OF NEUROTIC BEHAVIOR
DIVISION OF ANTHROPOLOGY AND PSYCHOLOGY
NATIONAL RESEARCH COUNCIL, WASHINGTON, D.C.

EDITORIAL BOARD

MANAGING EDITOR: FLANDERS DUNBAR

EDITORS

FRANZ ALEXANDER

Psychoanalysis

DANA W. ATCHLEY

Internal Medicine

STANLEY COBB

Neurology

HALLOWELL DAVIS

Physiology

FLANDERS DUNBAR

Psychiatry

CLARK L. HULL

Psychology

HOWARD S. LIDDELL

Comparative Physiology

GROVER F. POWERS

Pediatrics

ADVISORY BOARD

PHILIP BARD

CARL BINGER

HERRMAN BLUMGART

E. V. L. BROWN

WALTER B. CANNON

BRONSON CROTHERS

FELIX DEUTSCH

OSKAR DIETHELM

GEORGE DRAPER

EARL T. ENGLE

LOUIS Z. FISHMAN

JOHN F. FULTON

W. HORSLEY GANTT

ROY R. GRINKER

WALTER W. HAMBURGER

LUDVIG HEKTOEN

M. RALPH KAUFMAN

WILLIAM J. KERR

LAWRENCE S. KUBIE

DAVID M. LEVY

NOLAN D. C. LEWIS

KARL A. MENNINGER

ADOLF MEYER

WALTER L. PALMER

TRACY J. PUTNAM

STEPHEN WALTER RANSON

SAUL ROSENZWEIG

LEON J. SAUL

ELMER L. SEVRINGHAUS

EPHRAIM SHORR

DAVID SLIGHT

JOHN H. STOKES

JOSEPH STOKES, JR.

MARION B. SULZBERGER

ALFRED H. WASHBURN

EDWARD WEISS

JOHN C. WITHEHORN

HAROLD G. WOLFF

ROLLIN T. WOODYATT

EDWIN G. ZABRISKIE

PRINTED BY THE GEORGE BANTA PUBLISHING COMPANY, MENASHA, WISCONSIN, U.S.A.

FOREWORD

THE TRAUMATIC NEUROSIS has long been a troublesome medical and forensic problem. The medical aspects are fundamental because it is the resolution of these problems upon which all other social issues depend. Until the war of 1914-1918 this neurosis received but little attention. The main problem in connection with it was whether to account for the symptoms on the basis of organic or "functional" hypotheses. Moreover, the neurosis usually carried the name of the provoking agent, like lightning neurosis, railroad spine, shell shock, etc.

The neuroses incidental to the great war made the world neurosis-minded. They were studied with more care than at any time previously, and the literature is encyclopedic. Explanations of this neurosis on a functional basis came largely from the influence of psychoanalysis. The work of W. H. R. Rivers and William McDougall was highly significant, as well as that of Ferenczi, Abraham, Simmel and Jones. Freud never discussed this neurosis systematically, but made some extremely important observations about it in 1921.

Between this work and the present time lie the experiences with the chronic neuroses of the last war. This taught us much about psychopathology, treatment, and the complicated forensic issues connected with it. Nevertheless the conclusions of this work did not get much attention, and hardly influenced the conception of the peacetime traumatic neurosis, which is the same in structure as those precipitated in war.

The current war has again brought to the foreground the problem of the neuroses incidental to it. This time, however, the problem is much more urgent because, owing to the widespread aerial bombardment of urban centers, the traumatic neurosis is now no longer likely to be confined to combatants. In fact the traumatic neurosis bids well to be one of the commonest neurotic disturbances in the world. It is difficult to predict the nature and scope of the medical

and social problems that this new aspect will create, but there can be no doubt that these problems, both psychiatric and social, will be of prime importance. If we are not to repeat the errors made during the last war, with its accompanying waste, important problems in organization and study lie ahead. In our preparatory efforts the experiences of the last war and those in the current war should be our chief guide.

This book purports to be a guide to the study, treatment and postwar care of those neurotic disturbances which are incidental to war. The greatest stress in this work falls on the discussion of those principles of psychopathology necessary to make these neuroses intelligible and to furnish a rational basis for therapy. This was regarded as the prime objective, for without this knowledge no intelligent program for treatment, prophylaxis, and postwar care can be formulated. In addition, an attempt is made to discuss the forensic aspects of the traumatic neuroses, since so many of them become government charges for a long postwar period. Treatment is discussed at length only in connection with several chronic cases which terminated successfully. This is in no way to be construed as indicating that therapy in these chronic cases is universally successful.

Most of the clinical material included in this book was gathered while I was Attending Specialist in the Outpatient Department of U. S. Veterans Hospital Number 81 during 1922 to 1925. All but a few of the cases were studied there. Some of them were repeatedly demonstrated to classes in psychiatry from 1923 to 1928. The case which is the basis for the discussion on therapy was demonstrated in person before the New York Society for Clinical Psychiatry in February, 1924.

Although the purpose of the book is purely practical, the opportunity was used to discuss all the accessory data necessary to a more complete understanding of this type of neurosis, and also to discuss some pertinent issues in psychopathology. The reader not interested in any but the clinical and practical aspects of these neuroses can safely delete Chapters IV and V.

The material of this book was the subject of a paper originally published in the *Psychoanalytic Quarterly* (Vol. I, nos. 3-4), under

the title, "The Bioanalysis of the Epileptic Reaction." In that paper the emphasis was largely theoretical. The chief interest there was to reconstruct the nature of the epileptic reaction. Some of the cases there used are reproduced here. The clinical material in the present book is much more extensive, however. As regards the psychopathology, the conception of the traumatic neurosis is essentially the same. However, the theoretical reconstruction has been considerably altered and much simplified, this simplification being due to a change in the operational concepts employed. The chief operational concept in the first version was that of "instinct," and in order to describe the dynamics a good many obscure concepts had to be devised which were not very helpful. These have all been deleted. I am indebted to the publishers of the *Psychoanalytic Quarterly* for permission to reproduce some of the material published in the earlier work.

The short bibliography is no indication of the extent of my indebtedness to other writers on this subject. I have included in this bibliography only those references of which I have been able to make positive use.

For the consummation of this work I am indebted to: Dr. Walter Treadway, through whom I received the opportunity to study these neuroses; to the late Dr. George H. Kirby; to Dr. Adolph Meyer, for discussions while the material was organized; to Dr. Sandor Rado, for continual encouragement; and Dr. Otto Fenichel for a very stimulating criticism of the above mentioned paper (*Int. Zeitschr. f. Psychoan.*, 1934).

I owe a great debt of thanks to the editors of *Psychosomatic Medicine*, especially to Drs. H. Flanders Dunbar, H. S. Liddell and Franz Alexander, for their editorial criticism and assistance in the preparation of the book. I am also indebted to Dr. Harold Kelman for studying the theoretical parts of the book, for some suggestions on organization for treatment, and on problems for future research. His experience with civilian and war traumatic neuroses was useful to me as a check on my observations, and discussions with him were useful in formulating my opinions on many matters.

New York

A.K.

November 3, 1940

CONTENTS

FOREWORD	v
--------------------	---

PART I: CLINICAL

I. INTRODUCTION	3
II. SYMPTOMATOLOGY OF THE TRAUMATIC NEU- ROSES	7
Pathoneuroses—Hypochondriasis	7
Schizophrenia	9
Transference Neurosis	10
Defensive Ceremonials and Tics	15
Autonomic Disturbances	21
Sensory-motor Disorders	29
The Epileptic Symptom Complex	36
Summary	66
III. ANALYSIS OF THE SYMPTOMATOLOGY	68
War and the Traumatic Situation	68
What is a Trauma?	74
The Alteration of Adaptation in	81
1. Repetitive tics and ceremonials	81
2. Sensory-motor phenomena	82
3. Sympathetic-parasympathetic phenomena	82
4. Syncopal phenomena	83
The Organization of the Neurosis	84
Constant Features of Traumatic Neurosis, including	86
1. Fixation on the traumatic event	87
2. Dream life	88
3. Contraction of general level of functioning	94
4. Irritability	95
5. Tendency to aggression and violence	96
6. Inhibitory phenomena	97
Regression or Disorganization	100
Traumatic Neurosis and Epilepsy	117
Conclusion	131

PART II: THEORETICAL

IV. THE DEVELOPMENT OF THE EFFECTIVE EGO	135
Introduction: Methodology	135
What is Adaptation?	141
Development of Adaptive Patterns	142
The Development of Mastery—Automatization of Functions	146
The Internal Environment and Its Rôle in Activity	157
The Effective Ego and Failure Reactions	160
Summary and Conclusions	169
V. PSYCHODYNAMICS	177
Structure and Relations of the Action Syndrome	177
The Consequences of the Inhibition	182
Nosological Considerations—The Physioneuroses	193
Summary and Conclusions	198

PART III: PRACTICAL

VI. COURSE, PROGNOSIS, DIFFERENTIAL	
DIAGNOSIS	209
Course	209
Prognosis	211
Differential Diagnosis	212
VII. TREATMENT	216
Acute Cases	217
Treatment of Acute Conditions	217
Chronic Cases	221
Further Points in Technique	227
Hospital Organization for Treatment	228
Prophylaxis and Civilian Morale	230
Summary	232
VIII. FORENSIC ISSUES	233
IX. OPEN QUESTIONS AND FUTURE PROBLEMS	240
Questionnaire on Traumatic Status	242
BIBLIOGRAPHY	247
INDEX	253

PSYCHOSOMATIC MEDICINE MONOGRAPH II - III

PART I: CLINICAL

I. INTRODUCTION

THE TRAUMATIC NEUROSIS is the commonest neurotic disturbance of war. This does not mean that the traumatic neuroses of war differ in any way from the traumatic neuroses of peacetime or from those following upon natural catastrophes like great fires and earthquakes. Nor is the traumatic neurosis the only reaction to the war situation. These latter may include every known neurotic and psychotic disturbance occurring in peacetime, the only difference being that their course is in no small measure altered both in tempo and intensity from those that occur in peacetime. In addition to these, every possible variation of concussion syndrome with or without actual somatic damage, and every conceivable emotional reaction to these injuries may result from the war situation.

This book does not purport to treat of all the psychic disturbances of war. It seeks merely to explore a highly specific syndrome which can be called the *traumatic neurosis*. Its purpose is to establish the symptomatology, criteria for differential diagnosis, and to establish a rationale for therapy.

The importance of this neurosis is due, not only to the severe incapacities which result from it, but also to the many and complicated forensic problems which it brings in its wake. The chief of these is the problem of compensation and the management of the veteran with such a neurosis. A second type of problem presents itself in the traumatic neurosis which refers purely to psychopathology, and in this the significance of the traumatic neurosis becomes very great indeed. These problems in psychopathology concern first those of method: namely, what criteria to use in establishing the symptomatology of this disease; what operational concepts are to be used to establish the nature of the symptoms; the essential psychological processes; and finally, what therapeutic indications follow upon the conception of the illness derived from these sources.

During the last war several conceptions of these neuroses pre-

ailed. Those who were accustomed to the organic point of view naturally regarded all the phenomena of this neurosis as due to the direct effect of a widely disseminated organic lesion. The support for this idea came from the vast number of neuroses associated with severe concussion syndromes, with indubitable evidence of the existence of actual organic lesions. For practical purposes this conception of the traumatic neurosis did very little harm, for it encouraged a regime of supportive treatment; and even if many of these cases did not recover, the residuals were still attributed to the organic injury. This point of view was, however, seriously brought into question when large numbers of neuroses were found with no evidence of concussion but still with symptoms in many ways like those in which the evidence for organic injury was unquestionable. This justifies the conclusion that the symptoms resulting from the concussion were not direct evidence of organic lesions but that they were the indirect effect of these lesions upon the total adaptation possibilities of the individual and that the interference in adaptation could occur with or without organic injury.

A second point of view exploited in connection with this symptom complex was that the traumatic neurosis was "psychogenic" in character. Whereas this point of view was very plausible, one again needed definite criteria. One group of authors elected to describe the illness as due to specific conflicts occasioned by the war situation as against the peacetime situation; that is, the peacetime ego was contrasted with the wartime ego, and the conflicts were entirely in terms of the issue of self-preservation as against ideals of heroism, patriotism, and the like. Whereas it is plausible that such conflicts do exist and undoubtedly contribute much to the ultimate picture of the neurosis, it must again be pointed out that these neuroses are extremely common in peacetime when the issue of peacetime versus wartime ego does not exist. Furthermore, such conflicts do not in any way explain the symptomatology of the disease. In other words, many factors may contribute to the formation of the traumatic syndrome, organic lesions, self-preserved interests, and conflicting ideals. The essential problem of psychopathology is to explain the manner in which the symptoms are constructed.

From the point of view of interpretation of the symptoms, that is, their origin and meaning, psychoanalysis made some interesting suggestions. Psychoanalysis offered its particular conception of the neurotic process as it was known up to that time (1918). The neurotic process was conceived as an interference with certain instinctual drives, and the symptom could be accounted for on the basis of regressive substitute formation. In this regard the traumatic neurosis did not fall easily into the category of the previously well-studied transference neuroses, hysteria and compulsion neurosis. Efforts were made to create new classifications. Traumatic neuroses were considered "actual neuroses," organ neuroses, pathoneuroses, pregenital conversion hysterias, narcissistic neuroses, and so forth. These classifications, in extremely confusing terms, offered little basis for psychotherapy. In fact, the therapeutic measures used successfully in treating these neuroses had very little to do with the conception of the psychopathology.

From the point of view of psychopathology the orientation in terms of instinct was very misleading. The pathology of the transference neuroses was worked out on a series of illnesses in which the sexual instinct was supposed to be directly involved. In the case of the traumatic neuroses, the psychopathology had to be accounted for indirectly as due to the operation of the castration complex. It assumed that one could track down the pathology of an interference with self-preservation with the same criteria used in establishing the interference with the sexual instinct, notwithstanding the fact that up to 1918 there was no success in describing the pathology of the so-called ego instincts, and that "self-preservation" was the name of a result and not of an instinct.

The point of view of this volume is somewhat different. Let us make the general assumption that elementary drives do exist. But we cannot today any longer assume that the phenomena we observe in psychopathology are in any way to be construed as direct evidence of the operation of this, that, or the other instinct. The reason is that the object of study is always a personality as a whole. We observe functional and functioning units and not drives. These units are either effectual or ineffectual as regards their ultimate purposes for

the personality as a whole, and the question as to whether or not they furnish direct evidence of "instincts" is irrelevant. What we observe in the traumatic neurosis is a characteristic interference with certain effectual units, the ultimate purpose of which may be self-preservation or preferably, a certain kind of effectual adaptation. This is quite a different thing from saying that we observe an interference with the instinct of self-preservation. With this shift in point of view, the emphasis in the psychopathological data falls in a new direction. The concern with the question about the *content* of the manifestations (that is; is it narcissistic, pregenital, and so on) yields to the question as to *which executive function* is interfered with and why. In other words, emphasis is shifted from content to *form*. The failure due to describing the neurosis in terms of content was the fact that it did not take in the main factors in the psychopathology. If one describes a neurosis as narcissistic, one has yet to describe the difference between narcissism as it occurs in manic depressive psychosis, epilepsy, schizophrenia, or the traumatic neuroses.

In short, it is the purpose in this book to describe these neuroses from the point of view of the *field*, or action syndrome, rather than that of instinct. This must not be construed as a denial of drives; it merely questions the assumption that *instinct* or drive is an adequate operational concept that can do justice to the clinical facts and offer a basis for therapy.

The traumatic neuroses can be studied in the acute or stabilized forms. For the purposes of this book the stabilized forms offer the best opportunities. Recent literature on the current war demonstrates that the symptomatology of this syndrome is no different today than it was during the last war (64). It further demonstrates that in the acute stages no definite opportunity exists for the study of this neurosis.

The plan of the book is first to describe the clinical forms of the traumatic neuroses; then to determine, from the analysis of the symptomatology, what aspects of the personality are involved; to arrive at some working definition of trauma, thence to a discussion of the psychopathology, and finally to a discussion of therapy and the forensic problems involved.

II. SYMPTOMATOLOGY OF THE TRAUMATIC NEUROSES

THE SYMPTOMS of the traumatic neuroses vary according to how soon they are observed after the trauma. This is particularly the case with the neuroses of war. The symptoms can be described as *acute*, *transitional*, and *stabilized* forms. The time interval between the acute and stabilized forms is generally two or three weeks. There are exceptions to this, as will be seen from a number of the cases below, some of which take as long as six months to become stabilized. The cases which stabilize most rapidly are the sensory motor disturbances; those which take longest, the ones terminating in epileptiform phenomena. The cases which, in the stabilized form, have purely autonomic (sympathetic and parasympathetic) phenomena have the most varied symptomatology and generally represent residuals of a long series of changing symptoms.

The acute symptoms may be:

1. Symptoms of shock, with typical manifestations of terror.
2. Comatose conditions.
3. Maniacal reactions, excitements, and fugues.
4. Delirious reactions.
5. Paralyzes and sensory disturbances, without other manifestations.

For purposes of study the stabilized forms of the neurosis are the most important. For the greater part, once this stabilized form is reached, it can remain stationary for as long as ten years—the longest period I have had the opportunity to observe them.

PATHONEUROSES—HYPOCHONDRIASIS

Case 1. The patient, a soldier twenty-five years old, fell with an airplane from a height of one thousand feet. He struck the ground with great violence but was not killed. He could remember nothing after the moment of striking.

During his convalescence he was told that, immediately after the injury, he acted as if he were not unconscious; in fact, he had helped himself into the ambulance and had spoken to the woman who assisted in his rescue. But for all these circumstances he had a complete amnesia. He was in a state of "unconsciousness" for five days. During that time he remembered a dream in which he had an enemy helmet on his head and was engaged in tearing it off. After he regained consciousness he was told that during his sleep he had torn a plaster of Paris cast from his head.

During the past six years the patient had had falling dreams two or three times, and he remarked that this was about the frequency with which he used to have falling dreams before the accident. He had had a certain amount of fear of high places, fear of driving, but hardly to a degree of being distinctly neurotic.

His chief preoccupation was with a facial deformity which had resulted from this fall. He now carried about in his coat pocket a picture of himself as he was before the accident and, gazing at it frequently, continually bemoaned this disfigurement. As a matter of fact, no one would have realized that the young man had suffered a deformity of the face, unless he had previously known the patient. There was nothing but a slight asymmetry and a flattening of the nasal bridge. In this case the effects of the trauma were completely dissipated in the preoccupation with the deformity it had caused.

Here it is important to note the rapid disappearance of the typical dream life and the absence of irritability, aggressiveness, and inhibitions. But in their place was a severe hypochondriasis. This type of outcome is extremely rare. The hypochondriasis is not nearly so prominent in cases where the injury is inflicted on a part less important, from the narcissistic point of view, than the nose. The reaction to the traumatic situation consists of a preoccupation with his appearance. The general formula for his obsessive thinking is, "I have lost the claim to social recognition and love, and I do not love myself any more." Such a syndrome was described by Ferenczi under the name of pathoneurosis. This type is one of those responsible for the conclusion that those who are injured do not develop a traumatic neurosis.

SCHIZOPHRENIA

Case 2. The patient, twenty years old, was intellectually below average and was always engaged in unskilled labor. While in service he was "buried by a shell." He was taken to a hospital but did not remember any of his immediate symptoms. He did, however, remember that most of the symptoms of which he now complained began after his trauma. Symptoms included persistent insomnia, typical nightmares of things being on fire, people being killed, he himself being annihilated. He had distinct delusions of reference, of people talking about him, and an irresistible impulse to strike people on the street. He thought other people on the street offended him. He was also constantly hallucinating the voice of his dead mother, who was always reassuring him not to be afraid. Extremely superstitious, he was afraid of seeing ghosts, afraid of crossing the street. He had delusions about a foul odor's emanating from his person. He thought he "smelled like a dead rat." He could not adjust himself to his father, with whom he always quarrelled. So difficult had relations between them become, that his father once put him out of the house. The reasons for these quarrels were usually some trifling matter, but the patient was evidently responsible for all these disturbances. At the time of his treatment he was better than he had been at any time during the preceding five years.

A simple paranoid schizophrenia, this case is of special interest because, besides the outspoken schizophrenic features, some of the features are distinctly characteristic of a traumatic neurosis. A great deal of resemblance lies between the persecutory fantasies of a paranoiac and the dreams of a traumatic neurotic. In paranoia the patient is persecuted by the individual by whom, unconsciously, he expects to be loved. In the traumatic neurosis he is persecuted, in a similar way, by the environment, which has for the time being withdrawn its protective character. The fantasy of world destruction in schizophrenia is apparently a manner of perceiving in the outer world what is really happening within himself. The paranoid delusion, in the above case, cannot be considered in any way a transference symptom of the reaction to trauma because, as a rule, the secondary defenses

of the traumatic neurosis have a psychological elaboration which usually has no resemblance to the paranoid delusion. I have, however, seen several cases in which the quality of the symptom was pre-eminently that of the traumatic neurosis, but in which persecutory ideas were present occasionally and intermittently. Possibly the trauma, in this and in similar cases, serves rather as the occasion for touching off a deep-seated latent schizophrenia, but it seems also to impart to the resulting clinical picture something of the characteristics found in all traumatic neuroses.

It is worth noting that transient schizophrenias, many of which terminated in complete recovery, were common during the war. The trauma can only be considered a precipitating factor, hardly a causative agent that provoked the illness. In the light of what we know about the characteristics of traumatic neuroses, a schizophrenic reaction is, conceivably, one of the effects to be expected; the trauma gives the already enfeebled adaptive resources an additional setback.

TRANSFERENCE NEUROSIS

Case 3. The patient was twenty-eight years old. Since fourteen, he worked at various trades and finally became a pipe fitter. Prior to service he got into some difficulties with the law because of his participation in street brawls. He was evidently a very pugnacious individual.

The life of a soldier apparently agreed with him. He enlisted for service on the border but was recalled to serve in France. Never wounded, he had only one traumatic experience in the form of mild gassing, in August, 1918. Neither during his convalescence nor immediately thereafter did he have any symptoms, but his breakdown occurred after returning to his country. The occurrence of the first symptoms after the return to a peaceful environment is usually more apparent than real. As a matter of fact, there usually is a continuation of the same symptoms that were present in the danger zone, but they are not noticed there. They are usually felt when the external turmoil has ceased.

His symptoms were irritability, depression, tremors, sensitiveness to noise—so much so that he could not resume any form of work

involving constant noise. He had spells of aggressiveness and unreasonable temper; vertigo was a pronounced symptom, often keeping him in the house. In addition to these, he had several well-defined phobias; fear of riding in the subway and fear of insanity. During the day he was obsessed with recollections of the scenes of war, and at night he used to have typical nightmares.

The capacity for displacement, in this case, is quite pronounced. His fears displaced themselves on a great many situations and had the character of true symbolic displacements and not of superficial resemblances to his war experiences, as is so frequently found in traumatic cases. He had constant fears, for example, that someone was entering his house, fears that his child was going to die, fears that something would happen to his wife or to other members of the family.

The chief interest in this case lies in the fact that the anxiety of this type of patient is very readily recognized as such. The escape from the repressed ideas takes place in much the same way as it does in the ordinary transference neurosis. The patient accordingly showed himself, to a large degree, accessible to psychoanalytical therapy. The neurotic picture had two different aspects, one of them belonging to a psychosexual conflict, the other to a traumatic neurosis, and the two communicated freely with each other. His accessibility to treatment brought good results. The remarkable feature is the fact that his displacement phobias were much more readily removed than his secondary symptoms resulting from the traumatic neurosis—his sensitivity to noise, his irascibility, etc.

The patient married after his return from abroad "in order to cure himself." The transference symptoms were very largely superimposed upon and independent of his irascibility. However, in the course of treatment, the patient was able to utilize his marriage as he originally designed. His newly-born child came to be the focus of his entire interest and attention.

Case 4. The patient was thirty years old. From his past history he gave a typical psychoneurotic picture. He was never in love with any woman; he was unmarried; his sex life was far from normal. His

symptoms were a general and a constant apprehensiveness, fatigability, and insomnia. He had grown away from all his social connections, was quite seclusive, and according to his own description, very unlike his former self. Since the war, his sexuality had been more repressed than ever. He had the typical dreams of the traumatic neurotic—of war scenes, particularly those in which he was being buried by shells; of being in close spaces; of being in the trenches.

He had one very pronounced phobia, the fear of riding in the subway; while in the subway he had characteristic anxiety crises—a feeling of discomfort, a choking sensation, an uncontrollable anxiety. He would heave a sigh of relief when the train reached the surface.

During the war he was exposed to many petty traumata, but the most distressing experience he could recall was that of “going over the top.” He was on several occasions buried in the trench, where he saw several of his companions killed. Symptoms began shortly after he was taken away from active duty.

The predominance of displacements in this case is quite obvious. To all intents this patient had an ordinary claustrophobia. The predisposition to neurosis was present prior to service, and one can readily see that the fear of the subway serves to carry off anxiety from both his egoistic and his sexual conflicts. This is typical transference neurosis. The traumatic experience aggravated a previous neurotic character disturbance.

Case 5. The patient, thirty-six years old, was married prior to service. Domestic life was very unhappy, and service was undertaken, in part, as a release from his difficulties at home. When he first presented himself, his chief concern was with the anxiety which was occasioned by riding in a train. This symptom, he said, made it impossible for him to go to work and thus interfered with his economic independence. The symptom, he also stated, arose while he was in service. His dreams were of the usual distressing character, most often concerned with being in a vehicle which was colliding with another. His dreams, however, as well as his daytime fantasies, usually contained a good deal besides this. He saw himself wounded as a result of the collision and mourned over by his wife and children.

He described other symptoms—intensive vertigo, some gastrointestinal disorders, tremors, irritability. He was also very quarrelsome.

An investigation of his phobia showed that it was connected with a special feature of train-riding, that he was never uncomfortable while the train was in motion, and that it showed itself only after the brakes were applied. He then grew very tense and feared a collision. Consciously he never associated his anxiety with any experience he had had. However, the patient had actually been in a collision. He was riding a motorcycle, without lights, on a dark night, and while making a turn in the road, he ran into a stone wall. Unconscious for some time, he regained consciousness in a hospital. Shortly afterwards he began to have distressing dreams usually involving some collision. After a while these dreams were elaborated into fantasies which indicated that the traumatic experience was serving the function of a displaced conflict. The following is a typical dream: "I was riding in the automobile when we collided with another car head-on. I was taken out of the car, all mangled, and my wife and children were standing over me, weeping."

We are now in a position to understand the phobia. The anxiety occurs when the brakes are applied; it is, to all intents, a defense mechanism which protects him from a recurrence of his traumatic experience. However, the dreams of collision have a definite relation to his sex life. After his trauma, the patient became completely impotent. He had a very ambivalent attitude toward his wife and, as we noted before, went into service with the unconscious motive of becoming incapacitated. His symptoms now kept him from going to work, and we find that the patient's interests were now overtly confined almost entirely to himself. His children and his wife hardly ever occurred in his associations.

The mechanism of defense in his phobia, as far as it was related to the actual trauma, was readily accepted; but when any step was made in the direction of analyzing the effects of the trauma in relation to his family conflict, I encountered the greatest resistance. He was able to ride in trains without anxiety, but his impotence, his irascibility, etc., persisted unabated. Moreover, he began to shift his interest entirely upon a hypochondriacal symptom which, prior to

this time, was latent. The vertigo now became his most distressing complaint. He was a building contractor; his vertigo was most pronounced in high places, thus constituting a perfect defense against his work. He then became much preoccupied with some gastrointestinal symptoms which grew more intense as time went on. He insisted on X-rays, numerous gastrointestinal examinations, proscopies, and operations. He also insisted that he was subject to frequent hemorrhages from the bowels.

Although it is premature at this point to discuss dynamics of the disease, to make clear some of the transference reactions of these patients, I must anticipate. The physician, in these compensated cases, stands for the government, which stands for mother (breast). Any attempt to deal with this dependency constellation is resisted. Depending on the previous historical development of the subject, he will flee from one symptom to another indefinitely, and if one gets anywhere near this oral dependency, he will not infrequently resort to flight from treatment. If the dependency is taken by force—by a reduction of compensation or the like—this precipitates the most violent aggression against physician (mother). The flight into other symptoms with cessation of treatment is the rule in these cases.

We see, therefore, that the traumatic neurosis, *per se*, occupied a relatively unimportant place in the clinical picture of the last case cited. The defense mechanism which directly referred to the traumatic experience was very readily removed. However, that part of his neurosis which signalized the trauma as a symbolic "castration" formed indeed the largest bulk of the clinical picture. The case is, to all intents, a transference neurosis released by the trauma.

These cases are of great importance; they make up the largest volume of those cases which in peacetime are considered "traumatic hysterias." They differ in no essential respect from the transference and narcissistic neuroses. Inquiry into their personal histories usually reveals infantile anxieties and subsequent psychosexual difficulties of gross character which, prior to the trauma, showed themselves in the form of inhibitions. In Case 3 the claustrophobia gets its special character from the experience in the trenches. These cases, in which transference mechanisms abound, in which the dreams and the sec-

ondary defenses show gross evidence of psychosexual conflicts, have no claim to the name of traumatic neuroses. How much a given clinical picture belongs to one or to the other is not very difficult to decide. It often suffices to hear merely the narrative of the type of dream which the patient has. In this regard the true traumatic neurosis is very easy to distinguish from the transference neurosis. The stereotype of the dream life of the traumatic neurotic is pathognomonic, as are likewise the secondary defenses and inhibitions.

DEFENSIVE CEREMONIALS AND TICS

A large group of cases possess symptoms which are chiefly unconscious defense reactions against the original trauma. This may persist in the form of a tic which, when analyzed, shows itself to be a defensive reaction actually engaged in during the original traumatic event. The defensive reaction remains, as it were, petrified, and the clinical picture looks like the photograph of a person engaged in running or like a pointer fixed in the posture in which he locates his prey. It may be a more complete elaboration of a defensive reaction which was not carried out on the original traumatic occasion. Of the first type we may mention a very simple case. A sailor was on board a battleship, when, without his being warned, a turret situated above and to the right of him discharged a volley. He was thrown to the ground, and since that time he has had a persistent tic of the head to the left. Consciously, the patient has no knowledge of the purpose of this tic, and he has long since forgotten the connection between the action and the purpose it served. Another common reaction type of this variety is shown by the defensive attitude of patients constantly on the alert for something to happen. Thus a soldier received a severe shock on the battlefield when a dud landed in front of him. Whenever he sees something that is "almost going to happen"—such as a child crossing the street and being "almost killed"—he is thrown into a panic of expectancy.

In the second group the defense ceremonials have the nature of compulsory acts which the patient carries out without knowing exactly why, but which relieve him of anxiety. The case described below is of this character. In this case a group of ceremonials, impulsive

postures, and attitudes are, so to speak, *correctives*. These activities are usually carried out with no more control of the will than is the ordinary compulsive ritual.

A third, though very uncommon, type is that in which a series of tics involves practically every part of the body. This is, so to speak, a fragmented, interrupted, and piecemeal convulsion. One such case was observed over a prolonged period. No part of the body was immune from these tic-like actions. In these generalized tics is a lack of the coördination and purposiveness encountered in the simple forms mentioned above.

The single and multiple tics are active most of the time during the day, but the patient is quiet after he retires. In this regard these tics differ in no way from ordinary tics of peacetime. They are aggravated by any effort or by sudden stimuli. Usually patients having these tics do not show the characteristic dream life. This symptom is evidently a sufficient outlet.

I have stated that the symptoms of compulsion neurosis are rarely found in traumatic cases. But here I recall one case in a soldier who was blown up by a shell. He had the usual nightmares and a few spells of unconsciousness. But these symptoms disappeared to give way to a series of tics involving every part of his body and giving to his intentional muscular movements an athetoid character. This patient had a compulsion to touch certain objects he would see, but he felt compelled to touch no specific object, and never the same object twice. I could not succeed in allocating any mechanisms in this case. He is the only case in which I have ever seen symptoms of a true compulsion. Unfortunately, opportunity did not present itself to study him more thoroughly.

Case 6. This patient was twenty-four years old. There was no history of neurotic traits. He had never suffered from any form of syncope, fainting spells, or convulsions. His sex life, as far as could be ascertained according to the usual criteria, was quite normal. He was a sociable fellow and enjoyed the pursuits fitted to his sex and age. Hardly out of high school, he enlisted in the army for purely patriotic motives. No history of friction or maladaptation at home

existed to serve as an unconscious motive for his departure. On excellent terms with his father, he also had, as far as could be elicited, quite a normal attitude toward women.

During his service in the army he suffered but one injury and that not a serious one; he was mildly gassed on one occasion. As a result of this, he had a mild chronic bronchitis. He was thus disqualified from doing certain forms of work, especially that connected with irritating fumes. Since his discharge from the army, he found that his efficiency was much impaired. He worked as a post-office clerk, then tried business for himself but was not very successful. His neurotic illness interfered with his efficiency to such a degree that he applied for and received vocational training. Between the time he left the service and the time he came under treatment, he had married and now had one child.

His physical examination was negative except for a few sibilant râles in the chest. Neurological status was negative. On mental examination I found only the evidence of an anxiety hysteria. During the daytime he suffered merely from a vague apprehensiveness.

The salient feature of his neurosis was a typical hysterical trance which overtook him just at the point of falling asleep and in the brief interval between sleeping and waking. Other features of the trance included his becoming stiff all over, an intense anxiety, and violent palpitation of the heart. "I feel as though I were passing out of the world, as if I were trying to fight death." These spells came about two or three times a week, sometimes as often as six times in one night. Naturally he feared going to sleep.

The neurosis began several days after he had been removed to the hospital, following his gassing (1917) and was initiated by anxiety dreams of the horrible scenes he had witnessed in the trenches. Several days later he had the first of these twilight terrors which persisted for five years thereafter. During this interval of five years he dreamed frequently of war scenes, always with anxiety.

After the attacks had troubled him for many months, he spontaneously devised a method for preventing their occurrence. What he did cannot be regarded as anything short of a compulsive ritual. It consisted of lying, face down, on his pillow, burying his nose in the

pillow and putting his hands alongside his face. In this prone position he had a feeling of security, and though he could not stop one of his spells by assuming this position, he was quite sure that, if he took this position on going to bed, he would not have a spell. He remembered often being awakened by one of these twilight states to find himself in the supine position.

When asked to explain what relation his ceremonial would possibly have to do with warding off one of his spells, he was completely at a loss. Evidently the meaning of it was entirely unknown to him, and ordinary introspection would be of no use in unraveling its mystery. The patient was asked to tell quite freely what occurred to him when he thought about this posture. His associations to the ceremonial were as follows: 1) swimming, 2) coitus, 3) "taking cover." Swimming is quite naturally a birth symbol, and here the patient, like many others, associates the trauma with birth. In connection with coitus was a long series of associations, all of which dealt with the subject of more children. He had but one child, his economic situation being so uncertain that he could not take the chance of having more. This led to a very complicated series of attitudes and reactions based on the issue of compensation, all to the effect that he needed compensation and could not get on without it, that his illness had robbed him of every bit of self-confidence he had ever had, and so on.

The association of "taking cover" led him back to the original injury, the only one he had received while in service. He then told how he happened to be gassed. On guard duty with five other men, he was awakened one morning by the sound of exploding shells, and in this semiconscious state he saw a large shell explode about twenty feet in front of him. On seeing the red flare, he immediately began putting on his gas mask. He remembered trying to hold his breath in order not to catch any of the gas before the mask was adjusted. And he then remembered that holding his breath was one of the features of his anxiety attacks and also one feature of the ceremonial. In the few seconds between seeing the flare and putting on his mask, his neighbor accidentally brushed it off just as he had it fitted and thus dislocated it. This resulted in his breathing the gas,

as he could no longer hold his breath. Then he lay there, face down, overcome, for a period of about half an hour, when he was removed to a yard station. He was much more frightened than seriously gassed.¹

Little doubt remains after this description, of what the neurosis consisted and what scene the patient was re-enacting in the trance and the associated ceremonial. The facts that the trance was accompanied by anxiety, palpitation and holding his breath and was relieved by his taking a position which he associated with "taking cover" and that this was accompanied by movements very like the motions of a man trying to fasten a gas mask to his face, indicated the typical phenomenon of traumatic neurosis, the repetition phenomenon. Here, again, is a symptom and a few secondary elaborations based on a traumatic experience which jeopardizes the individual's life; the ideational content is completely lost (repressed); the emotional reactions which originally accompanied it are split off and recur with monotonous regularity on the same occasion, namely the interval between sleeping and waking. Being on guard duty, he was not completely asleep at the time the shell exploded; his hysterical symptom guarantees an excessive amount of anxiety and preparedness which was absent on the original occasion. On each successive occasion he holds his breath, puts on his mask, and, thus prepared for a gas attack, he can go to sleep peacefully.

Several other features of the case must be included in this description. The issue of government dependency was intimately bound up with his neurosis, although it did not call forth the symptoms of the trance. The patient, as mentioned above, was in vocational training and was, in the meanwhile, being supported by the government. His training officer, owing to some misunderstanding, threatened to put him out of training for insufficient coöperation. For a short time he was without pay. During the interval the patient went into a profound depression and developed a new set of symptoms, fear of poverty and fear of insanity. With the adjustment of his difficulties in training, these symptoms disappeared. Interesting to note is that

¹ This case was presented in person before the New York Society of Clinical Psychiatry, February, 1924.

the old traumatic neurosis did not disappear under these conditions; he developed, on this occasion, new symptoms which he never had before. There is reason to believe that the symptoms which arose in connection with compensation link up very closely with psychosexual conflict but that the traumatic neurosis enjoys almost complete autonomy.

In this case, we note, the patient did not realize that the hysterical trance was directly connected with the traumatic experience. In other cases the patient seems to know that a certain given phenomenon is connected with a traumatic experience. On close examination it proves, however, that he is not much wiser than the one who is entirely ignorant of this fact.

This type of case is theoretically of great importance. We see here a repetition mechanism of high degree of organization; it is purposeful in making a correction over a situation which threatened the patient with annihilation. Capable also of symbolization and carrying a deep-seated psychosexual conflict, this type is the most highly organized form found in the various reactions to trauma, excepting, of course, the pure transference type. This patient's anxiety states have something of the quality of twilight states, which we shall subsequently encounter in the epileptic type.

This last case is important for many other reasons. It demonstrates the spontaneous cure of the neurosis. This condition is very like that of the ordinary compulsion neurosis; a ceremonial is devised, the purpose of which is to ward off anxiety. Here the resemblance stops, because in our case the ceremonial has a real basis and not, as it does in the compulsion neurosis, a symbolic one. The ceremonial which the patient unconsciously devises takes form some years after the original traumatic event. Moreover, it is not completely efficacious; the anxiety persists unabated. This ceremonial, therefore, has the mechanism of a compulsory act; its purpose is unknown to the patient, but it is used to ward off anxiety. Moreover, when the ceremonial is analyzed, the anxiety appears to be displaceable, much like that in the transference neurosis. This part of his neurosis is undoubtedly the result of an old character disturbance.

We note, however, that the control of the patient over his body-

ego remains intact. The unconscious memories of the traumatic event are capable of engendering anxiety, which is a much more highly organized reaction to danger than the death faint or any other form of complete lapse of consciousness. The conscious representability of anxiety, when it is capable of being perceived as such, evidences, therefore, a high degree of organization. As we shall subsequently see, this anxiety does not entirely preclude the possibility of epileptoid reaction types but renders it much more unlikely. Sometimes the barrier of anxiety is insufficient to stem the tide of the reaction, and it proceeds to complete loss of consciousness.

These two types—the transference neurosis following trauma and defensive tics and ceremonials—represent, therefore, the most highly organized forms of response to the unconscious activity of the traumatic event. It may be well to mention here certain anomalies of posture and gait assumed by soldiers, much to the amusement of lookers on. Gaupp (12) records that these soldiers would walk with the torso bent sharply forward, the upper extremities hanging limply down. This is an unmistakable attitude of defense under fire. Others walked “on all fours.”

AUTONOMIC DISTURBANCES

The type of case in which autonomic disturbances constitute the presenting symptom is extremely common in civilian life and is frequently found in individuals who have been subjected to a series of external hardships, shocks, fright, and so on. These cases were particularly frequent during the war. In the fresh state they received the name of “neurocirculatory asthenia,” “effort syndrome,” “soldiers’ heart,” “war neurasthenia.” Indeed, very likely a large number of the cases were described as Graves’ disease. Many of them, prior to the use of basal metabolism as a criterion, were mistaken for true Graves’ disease. It has recently been shown that a continuous series of stages exists between those cases which are merely autonomic disorders and true Graves’ disease, with all its characteristic symptoms and increase of basal metabolism. It has, moreover, been possible to observe patients passing from one to the other. Kessel and Hyman have noted that a large number of these cases begin in civilian

life after a period of economic stress or shock, such as the news of the death of a relative, a robbery, a business failure, and so forth. In all these cases the usual physiological accompaniments of anxiety persist long after the occasion which released them has ceased to operate. They differ from the civilian neurasthenias only in that the autonomic disturbances predominate.

In the acute stages vomiting, enuresis, diarrhea, and sweating were common. One case I saw was a man with sweating from the left hip down to the toes. His symptom, six years old when I saw it, yielded to no treatment including hypnosis. In the acute stages occurred dermatographia, aerocyanosis, abnormal blushing and pallor, edema, trophic changes in finger nails, dryness of hair, sudden grayness of hair, and sudden falling of hair. Among the secretory disturbances were anomalies of salivation and swelling of the parotid gland. Very few of these latter carried over into the period of chronic illness.

Case 7. The patient had been injured six years previously when buried by a shell. The symptoms of which he complained were gastric disorders in the form of spasms, evidently pyloric and cardiac spasms which occasioned vomiting. In addition he had the anxiety dreams of sudden crashes and of houses falling, from which he, of course, awakened with the customary terror.

Of chief interest in this case was the fact that, on external stimulation, he developed a new phobia which seemed to have no connection whatsoever with his traumatic experience. This occurred at the time when the Yokohama earthquake was being described in the newspapers. The patient was seized with a fear that the same thing might happen to New York. This fear obsessed him even at the time of treatment. The relation of the fear to his trauma is, of course, quite obvious.

This case shows that autonomic disturbances may coexist with displacement phenomena.

Case 8. The patient, aged thirty, reported that his first symptoms began in France. He stated that they began after he was struck by a hand grenade, resulting in a wound in his right thigh. He was hos-

pitalized for five weeks and discharged without any permanent injury. His service in the trenches was of rather long duration. An unusually brave soldier, he received two citations. His first symptom was a choking attack which, from his description, at first sounded like a globus hystericus. But these choking attacks were not always in the same location; at times they were rather high up in the esophagus, at other times in the epigastric region. Stammering was one of his chief symptoms. Prior to service he had a slight stammer, the origin of which he could not remember but thought that under conditions of stress he had been inclined to stammer ever since adolescence. Following his hospital residence the stammering became so intense that he could hardly talk. Tremors of the hand were very pronounced, becoming especially more marked on intention. There was a tachycardia and an inclination to profuse sweating. Sexual power was much diminished. Extremely irritable, sensitive to loud noises, and very irascible, he flew into a temper at a slight provocation and suffered from insomnia associated with dreams of exploding shells, falling from high places, and so on.

As a result of these symptoms, the patient's working efficiency was greatly diminished. His prewar occupation was that of a tailor, and since his release from service, he had been unable to hold a needle in his hand. Having recently been married, he was much concerned about his loss of efficiency. He had no prospects of being able to earn a livelihood and was, for this reason, under considerable stress most of the time. He began to show a diminishing interest in his environment and occasionally had spells of mild confusion, so that he did not know where he was. His memory for recent events was poor. He often found himself unable to recognize people on the street, although they were his intimate friends. His face was constantly flushed, his pulse rate varying between 120 and 140. Basal metabolism, determined several times, showed plus 1, plus 7, plus 9, and on one occasion, plus 21. His thyroid was not enlarged. Most of the symptoms, such as palpitation, sweating, tremors, vertigo, fatigability, and irritability, were constant. The intermittent symptoms were mildly confused states, smooth muscle crises in the form of pain, belching, choking sensations, and occasional vomiting. These smooth

muscle crises were apparently aggravated by fright or excitement of any kind.

The symptoms which caused him the greatest amount of distress were the spasmodic phenomena, the tremors, the stammering and the nightmares. Important to note is the absence of phobias. Moreover, the patient's ability to perceive anxiety was decidedly limited. He never complained of anxiousness or apprehensiveness, but he behaved as though constantly under the influence of fear. He was uncommunicative, there being no urge to talk, inaccessible to suggestion, and unresponsive to psychotherapy. He was somewhat improved when given moderately large doses of atropine. An important feature in this case was the fact that the traumatic experience reactivated a former *handicap*, namely, his stammering.

Case 9. The patient was twenty-five years old. His symptoms were of eight years' duration. Until two years prior to examination the patient was subject to frequent fainting spells. These fainting spells began shortly after a hospital residence, but diminished in frequency after discharge from service, and for the past few years had practically disappeared. His symptoms were headache and vertigo, hot flushes, spots in front of the eyes, noises in his ears, violent anxiety dreams from which he would awaken frightened, irritability, and sensitivity to noises. More recently he had been subject to gastric crises in the form of pain, pyloric spasms, nausea, vomiting, inability to take food and occasional hemorrhages which proved on examination to be due to retching. He was sometimes unable to retain food for days. His pulse was consistently rapid, varying from 120 to 150, accompanied by weakness, palpitations, and occasional flushing.

The patient did not notice most of these symptoms until he returned home. The only symptoms which troubled him prior to his return were his fainting spells. During service he was long exposed to trench warfare. On one occasion he was "blown up" by a shell and remained unconscious for some time. Under hospitalization, he began to have spells of unconsciousness. While in the hospital, he began to note his irritability; previously of a very friendly and sociable disposition, he now became extremely cross to his superiors and refused

to put up with treatment. He deserted the hospital and returned to his regiment, which we very clearly identified with his home. He remembered having, when in line of duty again, none of the symptoms he had had while in the hospital, but they all returned after the cessation of hostilities. This is another instance of how these symptoms are of some economic service during a period of stress. Their continuation after this period into normal activities gives them the character of symptoms.

The spells of which he complained were not accompanied by anxiety and were not of long duration; though he lost consciousness completely, he did not bite his tongue or relax his sphincters. The dizziness of which he complained was not, apparently, connected with any external stimulus or situation.

When originally seen, he was well nourished, his face flushed, his eyes injected; his thyroid isthmus was considerably enlarged, but the other two lobes were palpable as well. His heart was normal in size; the pulse rate, 100 to 150. Blood pressure showed 100/70. He had a negative Stellwag and a negative Von Graefe. There were fine tremors of fingers, face, and tongue and profuse sweating of the hands and armpits. He had a marked dermatographia and a slight exophthalmus of the right eye.

On original examination it seemed possible that he might be a case of hyperthyroidism. During the period of observation, over a year and a half, the patient's basal metabolism varied between minus 5 and plus 12. Therefore, this was evidently not a true Graves' disease but a general disturbance of the autonomic system, beginning with his war experience. However, in view of his unilateral exophthalmus, periods in which his basal metabolism was considerably increased were not unlikely. The only medication to which the patient made any response was atropine. This had some effect in slowing the heart action and diminishing the sweating and the visceral crises.

He had no anxieties or phobias. His irritability was provoked easily by obstacles encountered in the performance of routine activities and in the presence of persistent noises. He had gradually become somewhat seclusive because he could not stand the strain of social relationships. The interesting features of this case were the persistence

of aggressiveness, irritability, and the typical nightmares and the disappearance of his fainting spells which were unaccompanied by auras with or without convulsions. The probability is that all the symptoms of which he now complained were present on the battlefield. He took no note of them there. They became particularly prominent after the severe vertigo and fainting spells subsided.

Between this type of autonomic disturbance and true Graves' disease lies every gradation. The true Graves' disease differs only in that the basal metabolism is much increased. Moreover it is likely (Kessel and Hyman) that many cases of Graves' disease have periods of normal basal metabolism. Theoretically, these cases of autonomic disturbance are of great importance. They terminate either in true Graves' disease or in association with epileptoid phenomena. But I have never seen a case which showed *both increased metabolism and epileptic phenomena*. These cases are material for fruitful research; apparently the rôle played by the thyroid and increased metabolism has much to do with the reason for the absence of epileptic manifestations.²

Most authorities make no distinction between the autonomic and neurasthenic types. I think it expedient, however, to do so, inasmuch as each of these types represents a fixation on a different phase of the adaptive process to danger. That a group of neurasthenic symptoms is a pure fixation phenomenon is beyond question. The following case is an instance.

Case 10. The patient was thirty years old, a British subject, and had served in the Far Eastern campaign. Prior to service he was a healthy individual and had had no neurasthenic symptoms at any time in his life. During the campaign in the East he suffered untold hardships, chiefly in the form of starvation and sleeplessness. Lack of food and scarcity of men made it necessary for him to stay awake thirty-six to forty-eight consecutive hours over a period of eight months. During that time he had several illnesses which seem to have

² I regret that I could not further pursue this aspect of the problem. This case makes me strongly suspect that the increased thyroid activity is a process which is absent entirely in the epileptic reaction types. Graves' disease and the epileptic reaction type seem to stand at opposite poles.

been some form of colitis. Since then the patient had had persistent insomnia. He hardly obtained more than two hours sleep at night. He was also troubled with vertigo, exhaustion, constant debilitating feelings, anorexia, tremors, sweating, and frontal headaches.

The insomnia was apparently without content. No special thoughts kept him awake. He was very reluctant to talk about his experience in the East. Rarely did he have dreams; several which he brought were repetitions of something he had actually done during the day. Hypnotics had no effect.

In the acute stage exhaustive conditions were not infrequent. Gaupp (12) noted acute cardiac disturbances—low tension pulse rate, as low as forty per minute. Exhaustion and apathy were frequently encountered, but these improved after a few days' rest. The neurasthenic symptoms in the acute form were somewhat different from those of peacetime, according to Gaupp. The hypochondriacal features were much less emphasized during the war than after. This was probably due to the fact that the war situation placed a good deal more emphasis on the external dangers. Headaches, head pains of various kinds, vertigo, and exhaustion and inapplicability to work, poor memory, lack of interest in work, inability to concentrate, and a hopeless and apathetic attitude were some of the important symptoms found with great frequency in these cases. It has, moreover, been noted that the autonomic and neurasthenic pictures alternate with each other, first the overstimulation, autonomic symptoms, then the exhaustion phenomena. Most of these cases became well after removal from the situation of war.

The temptation has ever been to explain all these symptoms on the basis of internal secretory disorders. We cannot, however, regard the neurasthenic picture in any way as a distinct type. The essential symptoms of neurasthenia are present in almost every traumatic neurosis. The subjective loss of interest in work, with its corresponding effect on the moods of the individual, his feeling of being sick and his lack of energy, the lowering of the threshold of stimulating factors, the sensitivity to noise are not specific. Neither is the emphasis on any special site, organ, or function specific. The hypochondriacal preoccupations usurp the clinical picture as more severe symptoms

become present. Thus, Case 10 is a typical neurasthenia with a marked hypochondria.

Case 11. The patient was aged twenty-nine. Sexually he was retarded, "not interested," "only interested in electricity." Shy with women, he had had no intercourse before service and only once or twice after service. He had never had a love affair. Before entrance into service the patient's brother was killed in an accident in the subway. This affected him to a considerable extent. He liked the army life better than his previous civilian life. His health was always good prior to service; he was strong, swam well, and was generally a good athlete.

He reacted to service at the front fairly well. After repeated exposure to shell fire and loss of sleep he became fearful. He was in the artillery and used to go around without sleep for days. On one occasion he was unrelieved for twenty-five days and under heavy gun fire all the time. He was gassed mildly several times but was never blown up or buried by a shell.

He could not tell whether he had had any symptoms while at the front, but he had frightful dreams. After the armistice the following symptoms presented themselves abruptly: headache, anorexia, insomnia, dizziness, faintness, irritability, crankiness—especially to noise or argumentation, choking sensations in the throat with difficulty in swallowing, profuse sweating, tremors, dyspnoea, rapid pulse, and palpitation. Personality changes were decreased sociability and obsession with his illness and his symptoms. When he came back, he fainted several times; he had horrible dreams which continued constantly for two or three years and after that occasionally up to the time he was seen by me. Otherwise his symptoms were no different from those he had before he returned from France. He was easily alarmed at any accidents which he happened to see and became dizzy at the slightest physical hurt.

The chief emphasis of this patient was on the exhaustion and the hypochondriasis. This emphasis is not found in the autonomic cases. The two types, however, have much in common and, as a rule, represent two phases of the same condition.

SENSORY-MOTOR DISORDERS

In the acute stages sensory disturbances were extremely common, usually in association with motor phenomena. The sensory disturbances were frequent as accompaniments of wounds and injuries. In these latter cases the distribution of the sensory disturbance differed very widely. In conjunction with localized wounds were frequently found a general hyperalgesia, involving at times the entire body surface. Eder (18) reports such a case in which the slightest pinprick produced spasms amounting almost to convulsions. Anesthetics and analgesias were extremely common, often being associated with trophic skin disorders. The hyperalgesias as a rule resolved themselves into hypalgesias. Of special note is the observation that sensory disturbances were usually unilateral, involving the left side in right-handed people and the right side in left-handed people. Another very common complaint in the acute stages was pain, localized especially about the joints. These pains commonly accompanied monoplegia of the flaccid atonic form (Binswanger).

All the special senses were subject to serious disturbances of function. Single and double amblyopia associated with photophobia and pain. Hysterical amaurosis was observed to arise suddenly in soldiers in whom the eye was a particularly aggressive weapon, such as sharpshooters. Partial and total night blindness have been recorded. The commonest visual disturbance was the contraction of visual fields amounting at times to almost tubular vision. Binswanger also records central scotomata. These disturbances of vision were often associated with blapharospasm and strabismus. Among the disturbances of hearing were partial or complete deafness followed by pronounced hyperacusis; these were often associated with sensory disturbances of the external ear. Disturbances of the sense of smell as well as the sense of taste were occasionally observed. Also occasionally were cases in which all five senses disappeared temporarily. In the chronic forms most of the sensory disturbances persisted as a diminution of function. In the skin hypesthesia and hypalgesia were the rule. The one noteworthy exception to this was the ear, where hyperacusis was persistently general. Of the disturbances of vision, contraction of the visual fields was the most common in chronic cases.

The motor disturbances involved almost every possible function of the motor apparatus. In the acute stages perhaps the commonest of all were tremors, many of which arose from the condition of stress or shock and ran a comparatively short course. A large number, however, survived their hospital residences and attained a prolonged chronicity. Even in these cases the tremors were intermittent. According to Binswanger, these tremors were capable of imitating almost any organic condition; moreover they usually diminished on intentional effort. Most of them were very fine in excursion. The tremors of the hand sometimes attained a long chronicity. They were most often one-sided, involving the working hand. These tremors were a constant source of demand for vocational changes. Head tremors were a good deal more frequent during the war than afterwards. In the acute stages they showed themselves to be most refractory to treatment. The same is true of the chronic forms. In this type of tremor the patient usually had a weapon of great effectiveness in exacting from the environment any demand he chose. These tremors preserve in the chronic forms most of the characteristics they had in the acute stage. The hand may remain useful for gross operations; but for finer operations like shaving, buttoning a coat, or sewing, the hand is completely incapacitated.

Hysterical disturbances of gait were very common. Helpless conditions which followed acute fright on the battlefield frequently gave rise to local weakness of the lower extremities with dragging and wobbling gait, sometimes to complete inability and incapacity for locomotion. These disturbances rarely occurred alone but usually appeared in conjunction with tremors and syncopal attacks. All varieties were found from mild hysterical paraparesis to the most severe forms, in which the patient could not get about without crutches. Astasia-abasia was extremely common. Flaccid and atonic paralyses in the form of spinal paraplegias were frequent but proved most accessible to treatment. Monoplegias with contractures were also observed. Monomuscular contractures, in the form of ptosis and contractures of the platysma, were noted, and torticollis was not infrequent.

In the acute form speech disorders were extremely common. Most

of them, particularly the stammerers, were inclined to chronicity. The aphonias and mutisms in the acute stage usually resolved under treatment. Disorders of speech were most commonly associated with deafness; Eder (18) says four out of ten. In the acute form mutism was very frequent. These patients could, as a rule, write an accurate account of their experiences. In this state patients cannot cough, whistle, or make any sound when laughing and even have difficulty in putting out the tongue. These patients can speak under anesthesia or in sleep. Mutism may follow minor injury in some distant part like a leg. Stammering usually followed mutism in the acute stages.

Case 12. In February, 1918, the patient was on a transatlantic transport during some very rough weather. In the hold of the ship, where the patient was on duty, were a great many unattached trunks and boxes. Working in the hold was, therefore, a matter of continually dodging these objects as the ship pitched and rolled. The patient evidently missed dodging one of the huge boxes and was struck and squeezed between a big trunk and a bulkhead. He immediately lost consciousness, and when he regained his senses, he found himself in bed. Sensation and motion were entirely gone on the left side of the body. He had remained in this same condition to the date of examination, about seven and a half years after the traumatic event.

When first seen, the patient had a spastic hemiparesis of the left side, with contractures, and a typical glove anesthesia over this entire side of the body, including the head. Reflexes were all present, however; Babinski was negative, and pupils were normal. The entire side was subject to a trophic disturbance. Some atrophy was present from disuse, beside the beginning of contractures which yielded readily to passive movements. The patient was then able to use every muscle in the upper extremity but did not have any of the kinesthetic sensations which go with muscular activity. Through loss of deep muscle sense, he could not determine weight and shape. Heavy weights in the left hand would exert a pull at the shoulder, where he could appreciate it. He could consciously direct movements of his upper extremity.

These sensory disturbances remained unchanged. They extended up to the shoulder and consisted of loss of pain and touch, but he appreciated pain as pressure. He could not recognize objects by feeling them. When he attempted action with the right hand, the left was inactive; but when he tried to do anything with the left, his right hand usually executed the movements the left could not.

The patient was treated by suggestive methods; hypnosis was impossible. He refused absolutely to be hypnotized and had a resistance to anything that would remind him of a loss of consciousness. He refused to be anesthetized or to be given a few drops of chloroform in order to produce an artificial hypnosis. He was given symptomatic treatment for his contractures, and after several months of physiotherapy he made considerable improvement. He had no return of muscle sensation, however, or of sensibility, although, by dint of sheer conscious effort, he was able to manipulate his upper and lower extremities. This he did only on invitation, but what he could do left the limb still useless.

Interesting to note is that the patient had none of the usual symptoms of traumatic neurosis. He had no disturbing dreams, no irritability, no sensitiveness to sudden stimuli, no secondary character changes. His affect toward his disability was adequate, and he frequently lapsed into depression because he made no progress with his cure.

One day the patient returned to the Clinic and stated that he was perfectly well. Showing how he could use his upper and lower extremities with agility, he said that this had happened to him as a result of having touched a relic. However, a month later his condition was as bad as it formerly had been.

Case 13. The patient, aged thirty-two, prior to service had stammered slightly. The stammer became worse after one severe trauma in the army. The patient was advancing with his company when a shell burst about ten feet to the left of him. He was thrown down, but not buried; became dazed, but not completely unconscious. When he recovered consciousness, he found himself trembling violently, and upon attempting to utter some words, he failed completely. The patient's older brother stated that, when the patient was five or six

years of age, he developed a stammer, either in imitation or through the influence of a stammering playmate who lived in the same house. Before service, however, the patient stammered only moderately. The symptom had become much more severe since that time.

He had been noted to talk frequently in his sleep; he used foul language fluently; he sang very well. Recently, while under the influence of ether for an operation on his left lower extremity, it was observed that he spoke with great fluency and swore at the surgeon.

In this case one must note a very common phenomenon. The traumatic neurosis will revive a symptom that has long since been dormant or aggravate one that already exists. Though it was impossible in this case to investigate the origin of his original symptom, it was probably not different from any case of stammering encountered in civilian practice.

An important feature in this case is the absence of neurasthenic, autonomic, epileptic, or displacement phenomena. The patient never had any disturbing dreams and did not react violently to external stimuli. Neither had he developed any of the secondary character traits so common in traumatic neurosis.

Case 14. When originally seen, he complained of a strange symptom from both lower extremities up to the umbilicus. The patient was subject to feelings of numbness, pain, coldness, but more especially to sweating from the waistline down to the toes. This sweating, he said, was continuous, especially at night. When asked how old this symptom was, he said at least seven years. Among his other complaints were such marked irritability and instability of temper that he became aggressive and pugnacious very suddenly and without sufficient cause. He also suffered from spells of transient blindness, which lasted anywhere from five to fifteen minutes. Attacks of vertigo was a significant symptom. His sleep was disturbed continually by the usual dreams of drowning, being run over, receiving electric shocks. In some of his dreams he was the aggressor.

When inquiries concerning his traumatic history were made, he denied ever having suffered a serious shock. He casually stated that he was on board the U.S.S. "President Lincoln" when she was tor-

pedoed. He was then asked to narrate in detail the facts of this accident, which were in substance: He was gambling in the kitchen with several of the mess attendants when he heard a shot. This he interpreted as due to target practice and continued his game. Several minutes later another shot occurred and then another, the last one a distinct explosion. At this, all the men ran upstairs. The command was given to take to the lifeboats. He then realized that the ship had been torpedoed. It so happened that some of the lifeboats were disabled and thus not enough to go around. At all events, the patient and about eight other Negroes were obliged to take to the raft. He described the sinking of the ship and his lack of trepidation at the sight and his absence from panicky sensations. He said this was due to the fact that the retreat to the lifeboats and rafts was very orderly and that the ship did not sink until some hours later. At this point the patient became rather excited and began to swear profusely. His anger was roused, chiefly, by the incidents connected with the rescue. They were in the water for a period of about twelve hours when a torpedo-boat destroyer picked them up. Of course priority was given to the officers in the lifeboats. The eight or nine men clinging to the raft were allowed to remain in the water and had to wait for six or seven hours longer until help came. In describing his feelings while in the water, the patient emphatically denied having had any panic or fear. However, it was quite clear to the writer that, while narrating these incidents, he was very much disturbed. The disturbance he acknowledged. He said that telling the story made him fearful. I made him revive many details of the story which had a harrowing effect on him.

The similarities between the symptoms of which he complained, in the form of sensations and sweating from the waistline down, and his story of being submerged in cold water from this point of the body to his lower extremities, were pointed out to him. He admitted that, when he allowed himself to close his eyes and think of his present sensations, he still imagined himself clinging to the raft, half submerged in the sea. Thereupon the patient stated that while clinging to the raft, his sensations were extremely painful ones and that he thought of nothing else during the time. He also recalled the

fact that several of the men had lost consciousness thus and were drowned. To a large extent, the patient obviously owed his life to his concentration on these painful sensations occasioned by the cold water. The symptom represented, hence, an hallucinatory reproduction of the original sensations of being submerged in the water.

Concerning his remaining symptoms, it is of interest to note that he developed many of the secondary symptoms of traumatic cases which are epileptoid in character. The spells of transient blindness used to come on specific occasions—when he saw something in the nature of violence. Thus the patient was once walking on the road, and at the approach to a railroad crossing he witnessed an automobile colliding with a train. He became maddened with excitement, was blinded for ten minutes and was taken home in a state of extreme agitation. He alleged that it took him four months to recover from the effects of this incident, although the danger did not directly concern him. During these four months he was obsessed by the vision of the accident. He had, in fact, a profound reaction to violence of any kind and could not witness others being injured, hurt, or threatened. Prior to his service he never had fears or phobias. An employee of a railroad company prior to the war, he had seen a very serious railroad wreck without injurious consequence to his state of mind. In fact, he himself had assisted in extricating people from the wreck. He was also extremely sensitive to loud noises. This is remarkable because the patient heard very little shellfire during his naval career, yet he shared with patients who had come from the zone of active fighting this secondary reaction. He would yell and scream on a sudden call or other abrupt noise and was subsequently troubled by the violence of his reactions to these stimuli. He claimed that he felt like suddenly striking people and that he had become very pugnacious toward his family. He remarked, "I wish I were dead; I make everybody around me suffer."

The dream life of this patient consisted of the usual disturbing dreams, but recently his memory for them had been poor. However, he would start from his sleep several times during the night.

Of great interest is the fact that the patient had no sensory disturbance whatsoever in the lower extremities; however, he protected

them most tenderly with all kinds of ointments and with warm stockings in all temperatures. His reactions to water were quite typical. He did not like sea-bathing, and after his return from service, whenever he had attempted to go into the water, he had always become nauseated and vomited. Now he was avoiding sea-bathing.

The conditions in the sensory motor group which tend toward chronicity are the spastic paralyses which usually develop contractions, the course and fine tremors, the sensory hypochondriacal fixations, the stammering, and the functional exaggeration of somatic injuries, especially in the region of wounds. Enuresis persisted in only a few cases. The vasomotor secretory disturbances in the form of sweating often attain a chronicity in most annoying forms. Thus one patient had a unilateral sweating, involving first the entire right side of the body, then only the region from the waistline down. This was unaccompanied by the usual dream life and irritability.

THE EPILEPTIC SYMPTOM COMPLEX

In the acute stages a great many of the war neuroses were noted to have paroxysmal, recurrent symptomatology. The commonest forms were mild syncopal attacks, sometimes breaking out abruptly, but more often after a brief period of prodromal symptoms, such as nausea, weakness, and "blackness before the eyes." The preëminent symptom was an unconscious state with flaccid limbs, closed eyes, and complete loss of consciousness. During the attack the face was pale, respiration superficial, and pulse slow. Patients were impervious to external stimuli and insensitive to pain; at times the eyelids fluttered. The eyeballs were mobile and on forcible opening were usually rolled outward and upward. These spells, lasting anywhere from minutes to hours, would overtake the patient in the midst of activities and most frequently after exertion or effort. The spells corresponded in every way to the hysterical syncope noted in peacetime. However, during the war they were exceedingly frequent, and their content, as judged by the dream life and the secondary reactions, had really no resemblance to the hysterical attacks of peacetime. This condition was very frequent during active warfare, particularly during forced marches and active campaigns, but was not altogether unknown be-

hind the lines. Soldiers who were once subject to these attacks and were then sent back to the lines most often had recurrences of the attacks when reassuming their former line duties. A most interesting feature of these conditions is, according to Binswanger, their occurrence in the form of epidemics in hospitals. In other words, they were very easily imitated. Once this reaction was initiated, such patients would resort to it in the face of any frustration. The attacks never occurred at the beginning of a furlough, but very frequently at the end. This type of soldier was absolutely lost as regards his capacity for further service.

Besides this form was a group of hysterical lethargic states in which the paroxysmal changes in consciousness took the form of a profound, stuporous sleep. These patients would gradually stop their activities and fall to the floor in a deep, narcoleptic sleep. This could be differentiated easily from natural sleep by the response to external stimuli.

The more common twilight states occurred in their simplest form as abrupt changes from the state of sleep to a somnambulistic trance. They were, to all intents, fully enacted dreams. The patients would live through their war scenes very vividly while in these trances. Every detail of warfare was reëxperienced, accompanied by the appropriate mimicry and at times intermingled with reminiscences of their former lives.

Another form of twilight state occurred abruptly during the waking state, usually in a form similar to that of the nocturnal twilight states and with active hallucinatory experiences and mimicry. On these latter occasions the relationship with the external world was completely severed. Sensory stimuli on the skin and verbal suggestion had no effect. The attack gradually wore itself out. In a few cases, some contact with the external environment appeared to exist, except that the patients mistook situations and called individuals by wrong names. The sick chamber was often represented in hallucinations by a burning castle or a chateau surrounded by soldiers. Many of these hysterical deliriums were, to a certain extent, amenable to influence. The amnesia for these episodes was, as a rule, complete, though they could sometimes be recalled as dreams. These patients were amnesic for their war experiences, sometimes for only individ-

ual episodes, sometimes for an entire war period, and occasionally even for long periods prior to entrance into service. This amnesia was usually persistent. During these episodes cataleptic states involving the entire body or parts of it were encountered. These cataleptic states were sometimes of a complete rigidity and sometimes of a waxy flexibility.

Finally, there was a group of true convulsive states with very deep disturbances of consciousness, following immediately on an acute shock or an exciting experience. In many of these attacks, instead of a convulsion, wild gesticulations of the limbs, spasmodic stamping of the feet, and crying were its substitutes. Also, a partial tetany of all the limbs was noted.

The immediate reactions to shock or fright deserve our attention, particularly because of the sequelae we see in the chronic cases. In the first place is the reaction to fright or shock, known in peacetime, but not called pathological, since it leads to no permanent fixation. This consists of pallor, trembling, stiffening of the body; inability to speak or move the limbs; disturbance of cardiac rhythm, of the pulse, and of blood pressure; gastric and intestinal disorders; vomiting and diarrhea; changes in the respiratory activities, in the sweat glands, urinary bladder, and gastric juices; diminution in blood supply to the various organs; and dimming of consciousness even to exhaustion and inability to think sequentially. In these phenomena we are still within the limits of normal biological reactions to shocking external stimuli of body and mind. Such reactions are, as a rule, temporary, or else they give rise to death through paralysis of the vagus. This latter result, however, is very rare.

In the pathological cases and in those having a tendency to fixate upon the trauma, the effects are much deeper and much more lasting. For the frequency of these conditions during the war, the persistent trench warfare with its dull expectancy and its weapons of unprecedented power is undoubtedly to blame. When the reaction to shock and fright persisted instead of disappearing, as is normal when a condition of safety is attained, these conditions acquired a certain amount of psychological elaboration after the patient was out of danger. In most of the chronic cases observed, the symptoms first

took shape in the hospitals rather than on the battlefields. Some authors, I feel, have emphasized too much the acquisition of these symptoms in hospitals as a result of *suggestion*, that is, from seeing other patients in the same condition. This cannot be so, for we observe in almost every persistent case of this type that the disease is kept alive eight years or more after the traumatic event, by a very distinct dynamic group of forces which no suggestive power can simulate. Furthermore, we find in the symptoms themselves, parts of the original traumatic experience attached to or a part of the symptom itself. The fact that symptoms of a traumatic neurosis make their appearance some time after the traumatic experience can be verified in every case. On this account the reference to the contagiousness of the disease in hospital wards is somewhat exaggerated.

In the acute stages many of these shock cases were accompanied by unilateral motor symptoms, either paralyses or sensory or secretory disturbances, such as hemiplegias, hemitremors, hemianesthesias, or deafness on one side. This was also the case with the vasomotor and secretory disturbances. In fact, the more closely a symptom adhered to the autonomic classification, the more likely it was to be unilateral. Differences in the size of pupils, unilateral sweating, dermatographia, unilateral grayness of the hair, and so on, were of frequent occurrence.

Many of the acute reactions to shock terminated in what may be termed "shock psychosis." Upon being picked up immediately after the shock and placed in hospitals, many of these soldiers had initial anxious deliriums, during which everything in the environment was regarded as hostile and anybody who approached excited violent fear reactions. Wild motor activity with mutism, depression, and disturbances of sleep sometimes followed.

Perhaps the most common form of this psychosis was the acute, passive, negativistic stupor with mutism, complete immobility, total anesthesia with inability to take food, incontinence, total unconsciousness at first and later cloudy states, and inability to stand or to walk. Gradually these patients had to relearn sphincter control and enunciation of words—at first saying only "yes" and "no" and then answering to their names. Very gradually they were taught how to grasp

objects and how to feed themselves. Familiarity with the environment was also regained slowly; some time elapsed before the patient began to take an interest in his destiny. Of interest is the fact that most of these patients were able to recall the traumatic event; they remembered some details of their behavior such as making certain efforts to save themselves just before consciousness disappeared. Gaupp quoted a case without recollection of the traumatic circumstances beyond the optical and acoustic accompaniments of the exploding shell which caused him to lose consciousness. This latter observation is important because the psychic experience—the feelings and ideas excited by the explosion—called forth the powerful action of the entire organism, that is, unconsciousness and other symptoms of fright, as a defense against it. Gaupp believes that, between the moment of the explosion and the following psychic disturbance, an interval exists during which the perception of the effects of the explosion, the sight of mutilated comrades, the excitation of fright, aggravate the reaction to the trauma (12).

Often these cases of fright stupor were not always passive and without feeling. Very frequently the patients in their stupor shouted: "The enemy is coming!"; "They are coming!"; "Get 'em!"; "Fight 'em!"

In addition to these stuporous states and hypochondriacal anxieties are a great many delirious states, dimmings of consciousness, dream-like periods, complete disorientations of time and place. A queer form of behavior resulting from acute shock conditions was one in which the delirium took on a strange infantile character, in which the individual spoke ungrammatically, played with toys, clung to his sister's coat tails, mistook things in his environment as a child does. This type of behavior often gave the impression of simulation. These patients would answer: "Two times two are five;" "The sky is red;" "Grass is blue;" The examining doctor was his mother. Fantastic confabulations were also in this type of case. Some authorities see in this a pseudomanic picture. In some cases the deliriums were like manic excitements, and the patients had to be confined in padded cells or strait jackets for long periods.

Most of these acute cases recovered. A large number, however,

remained chronic in forms such as we have described under the autonomic disturbances. The more severe forms will be described below.

The term "epileptic symptom complex" is designated to describe a syndrome of frequent occurrence in the chronic forms of traumatic neurosis. This particular wording was first used by Stekel in connection with cases which clinically presented symptoms of essential epilepsy. I do not intend to convey, by the use of this term, that these cases are true epilepsies. They correspond more to what has hitherto been described in literature as "affect epilepsy," "reflex epilepsy," or periodic recurrent disturbances of consciousness. I believe that this symptom complex is very closely related to what occurs in other cases as pure forms of severe vertigo. The epileptic symptom complex may be found in cases which show, clinically, no resemblance whatever to epilepsy and in others which can hardly be differentiated from them. All these fluctuations and variations of symptoms seem to be differences in quantitative reaction rather than differences in kind.

A most frequent complaint among veterans six or seven years after return from war is the continuance of periodic disturbances of consciousness. This takes either the form of severe headaches and intense vertigo, sometimes so severe as to lapse into unconsciousness; twilight states, periods of dazedness, confusion; various somatic and peripheral paresthesias; or else complete loss of consciousness, with or without convulsions. In not a few cases one finds these twilight states accompanied by special modes of behavior before, during, or after the disturbance of consciousness. Thus patients will describe attacks that come on specific external provocation. Others occur with specific forms of aura; others, not initiated by auras of any kind, show instead of the typical convulsions, outbursts of violence, in which the patients break and tear objects around them or assault people. The convulsive states may or may not have biting of the tongue and relaxation of the sphincters. In addition to this central complaint, one often finds insomnia associated with the typical dreams of the traumatic neurotic, a symptom which continues unchanged despite the many years of removal from the seat of danger. A series of secondary defense reactions in the form of irritability to auditory stimuli or other specific

sensory irritability also exists as an evidence of a severe sadomasochistic conflict manifesting itself in extreme variations of temper, from undue tenderness to outbursts of cruelty and violence. In these latter cases is a variable amount of displacement, usually in proportion to the amount of anxiety. As a rule, these anxieties are devoid of content. That is, the patient does not fear a state of being or a situation; he is more prone to fixate his complaints on somatic or physiological accompaniments of fear. The variations in quality seem to depend chiefly on the degree of disorganization and are in part determined by the reaction to the original traumatic event. The whole epileptic symptom complex appears to be in the nature of a repetition phenomenon. The following case shows the mildest form in which the epileptic symptom complex may exist.

Case 15. The patient was thirty-two years old. He seemed always to have been a normal individual prior to service, well adapted in his sex life and social activities, and had apparently a normal attitude toward work. He was examined in a routine manner and did not regard his complaints as meriting the attention of a physician. He complained of periodic attacks of faintness, a dazed, numb sensation "as if all the blood in his body had stopped circulating." He also had a sensation of numbness, tightness and tingling about the mouth, a feeling of weakness, and a sinking sensation in the epigastrium. He never lost consciousness but felt dazed for a few minutes. After this was over, he was usually overtaken with intense panic; sometimes this panic came upon him without his feeling dazed, especially when he rode in the subway and the train happened to stop midway between stations. He had great difficulty in falling asleep and was usually aroused in a panicky condition just as he was about to fall asleep. This might occur as often as six or seven times a night. Frequently he was awakened from sleep by typical war dreams or other dreams of disasters about to overtake him. He was sensitive to noise and inclined to be alternately cruel and intolerant and extremely tender. These fluctuations of temper were unknown to him prior to service. The only trauma he suffered was that of being mildly overcome by gas. The sensations of panic and the tingling sensations about the mouth and

epigastrium he readily identified as the sensations he had had on the battlefield immediately before he lost consciousness from gassing. He thought, moreover, that his present episodic attacks were much more severe than the ones he originally had while on the battlefield.

This was a mild case persisting eight years after service in a person who had been fairly well adapted and who was so at the time of examination. If he had not been ordered, in a routine manner, to be examined, he would never have applied for medical help. I regard this type as being fundamentally of the same nature as the most severe cases, those which cannot be differentiated from essential epilepsy.

This series of cases shows certain characteristics by which we can judge the severity of the case, the depth of internal disorganizations, and the prognosis. Many of the cases manifest the same constant picture; the spells of unconsciousness are provoked chiefly by external factors which prove under close examination to be exactly the same factors causing the original loss of consciousness on the battlefield. In short, we have here a typical "conditioned reflex." It differs, however, in one important respect: conditioned reflexes are learned. Moreover the affective accompaniments of this reaction are different from those associated with conditioned reflexes. In another group of cases, the provocation is endogenous or endopsychic, and its connection with the original trauma is indicated only by a hallucinatory reproduction of some circumstances originally associated with the trauma. This has, in every way, the structure and the function of an *aura*.

A second distinguishing feature is the *variable amount of anxiety which is perceived as such*, displaced or utilized in connection with the attack. We find that this anxiety is really the nuclear phenomenon of the entire syndrome and that *the more readily the anxiety is utilized in the form of displacement or incorporated into the attack in some way, the less does the disease take on the characteristics of essential epilepsy*. In other words, when the anxiety is displaced, the condition has less resemblance to epilepsy; when the anxiety is lacking, completely repressed and in its place a group of defense mechanisms in the form of rigid tension states, the function of which seems to be to prevent the anxiety from becoming conscious in any form, the

resemblance to epilepsy is greater. The factors releasing the individual attacks may be of either external or psychic origin. Among the former the commonest is unanticipated noise and undue physical effort. The intrapsychic factors cannot be identified except by the traces left in the form of an aura.

Concerning the seizures released by external factors, we find that this sensitivity to release by noise or effort is merely an exaggeration of the characteristic found in all traumatic cases, namely, the generalized irritability and intolerance of effort. Instances of this type are too common to note, but perhaps the following will indicate how severe the reaction can be. A patient of about thirty years of age came for a routine examination and warned me, before I began, to be sure that I made no sudden noises; that, if he were to hear a sudden noise, he would not be responsible for his actions. He then proceeded to tell me that on several occasions as he was walking on the street, a passing automobile gave rise either to some backfire or a "blowout." The patient stated that he immediately lost consciousness, but during this state of unconsciousness he attacked the nearest passer-by and began to strangle him. On another such occasion he assaulted a traffic policeman and the latter, in order to protect himself, had to club the patient and bring him to the police station. He was released when his condition was investigated.

Whereas many of these cases at first react violently to noise, the older the neurosis grows, the less likely are they to respond violently to this stimulus. As a rule, the older it becomes, the more likely must the stimulus be something very specific, something directly associated with the traumatic experience.

Case 16. The following case is an interesting example of the repetitive mechanism provoked by external stimulus.

The patient was twenty-seven years old when first seen, his neurosis, six years in duration. He gave no history of neurotic traits in childhood. The disability from an attack of rheumatism while he was in training in this country was not serious enough to prevent his continuing military duties. While on duty he was with a detachment which took possession of a shack one night and was obliged to spend

the night there. He woke up in the morning and found that the entire company had been gassed while sleeping, several very severely. He himself escaped with a mild gassing. After hospitalization for six weeks he returned to his battalion. By that time hostilities had ceased, and in several months he came back to the United States. On a few occasions during this interval—the cessation of hostilities and the embarking for this country—the patient remembered getting the spells from which he now suffered.

The spells were described by him as follows: On certain occasions he would become violently flushed, his heart would beat rapidly, he would become dizzy, would vomit, and then lose consciousness. His loss of consciousness usually lasted from one half to one hour. He noticed that these attacks always followed exposure to certain odors, from volatile oils; thus an attack could be set off by perfume, lemon oil, banana oil, ether, chloroform, and so on. He also remarked that certain odors, such as musk, were offensive to him. Volunteering all this information, he came to the conclusion in the following way. At first, he said, the spells overtook him without any particular provocation. He was employed in a butcher shop frequented by fashionable women. Many of them came heavily perfumed. When they would enter the butcher shop to place an order, the patient would become dizzy and begin to vomit. Often being able to inhibit the symptoms at some stage, he would not always go through the entire spell to unconsciousness. However, his reactions interfered with his occupation so much that he asked for help.

He was then asked to recall his symptoms on that morning when he awoke in the shack and discovered that he had been gassed. He recalled a similarity to those which he now had on the stimulus of perfume; in fact, he remembered that what weakened him was the nausea, the vomiting, and the giddy feeling. In short, the flushing, the rapid pulse, the dizziness, and the vomiting were a repetition of the original traumatic event which overtook him in his sleep. The stimulus was always exogenous.

In addition to these symptoms, the patient had the usual secondary defense mechanisms of the traumatic neurosis in the forms of irritability, restlessness, ill humor, aggressiveness, and so forth. Five

years after the war had ceased, his dreams were also the typical dreams of the war neurotic. Their content took the usual form—being killed either by means of weapons, drowning, falling off buildings, and so on. Naturally his sleep was very much disturbed. His physical examination was negative, and no symptoms of a constant disturbance of the autonomic system were found.

That the patient was asleep when gassed is an important feature. It emphasizes the unawareness of the stimulus; and the awakening to find himself unprotected had much to do with the original traumatic impression.

The following case is of special interest because it illustrates the remarkable specificity with which the repetition mechanism manifests itself and the photographic manner in which it reproduces the original trauma.

Case 17. The patient was twenty-seven years old, a Negro of limited intelligence. He was accustomed to unskilled labor prior to service. Very little of his past history could be ascertained beyond the usual diseases of childhood. As is usual in his race, there existed neither a history of neurotic traits nor any history of venereal disease.

The patient made only one complaint, "spells." He described them as follows. They began with a feeling of itching in his face; this would last several minutes. "It feels like pins and needles. I get 'blown,' and then I become unconscious. Whenever I come out of the spell, my face is always swollen and scratched. The funny thing is that I only get these spell when it rains. I never get a spell when I am in the house; always when I am out-of-doors. I am terribly afraid of the rain. I am not afraid to take a bath, and I am not afraid of water, but I am afraid of the rain." The patient stated that in former years he used to get his spells whenever he was frightened or whenever he would hear loud noises; but of recent years he had them only in the rain; in fact, they occurred only when he became drenched or when his feet got wet. The aura described as itching of the face was present on every occasion when he lost consciousness.

From the history of these spells, this was obviously a repetition phenomenon. He was, accordingly, asked to describe the loss of

consciousness which he originally had on the battlefield. The patient had at that time a partial amnesia for the events of the morning of September 26, 1918, when the traumatic event took place. It was a very stormy day, and he was in a company charging a position along a river. He remembered rushing forward in the violent rain and being drenched through to the skin. He also remembered the sensation of the rain beating down on his face. He recalled having passed through two towns and also having received a head wound which, however, did not cause him to lose consciousness or to retreat. He continued, notwithstanding his wound. Although it had penetrated his helmet, the wound was evidently very superficial. At the time he was wearing a gas mask which was leaking. The point at which his memory grew dim was the race down a steep incline and his falling to the ground.

Aside from the small scalp wound, the patient received no other injury. He woke up in a hospital several days later. It is reasonable to suppose, therefore, that, due to the violent storm and the patient's falling to the ground in an unconscious state, he must have been exposed to the rain for a long time and to the sensation of water's beating upon his face and perhaps to fragments of dirt and sand. Moreover, his face was also burned by the mustard gas.

The neurotic reproduction was, therefore, photographic. The itching of the face was undoubtedly a reproduction of the sensation of the splashing of mud upon his raw skin and the burning of the mustard gas. The scratching executed in his trance was again the effort to remove the offending stimulus.

The patient likewise emphasized the change in his character from normal behavior reactions to violent tantrums, a tendency to aggressiveness and irritability, and the feeling of great commiseration when anybody was exposed to danger. When he saw a child either injured or "almost injured," he became completely unnerved and had to go somewhere for a drink to brace himself. During the time of observation, the patient happened to be out one Sunday when it began to rain. He had a tendency to forget that his spells would come when it rained. Interesting to note is that he did not always protect himself against the rain. On this occasion his feet became wet, and a spell

ensued, thus accurately repeating the phenomena as above described. The patient was sometimes able either to control the spell or inhibit it. *He suffered from feelings of anxiety, panic, and helplessness just prior to the spell, but in the intervals he had no such symptoms.* I never observed the patient in one of his spells nor the special character of them.

A remarkable feature of this case was the nonprojection of his phobia. In his neurosis, so different from the ordinary transference neurosis which erects many defensive barriers before the dreaded situation, this patient really did not "know enough to get in out of the rain." He did not feel compelled to carry umbrellas, rubber shoes, or raincoat. Moreover, one must remark the inadequacy of anxiety as a protection altogether, since it preceded every attack but had no influence in arresting it.

Case 18. The patient, of meager education, was twenty-six years old. The only thing noteworthy in his past history was his not being a neurotic individual. He was sociable, a steady worker, and always healthy. He married young, was much attached to his wife, and had two children of whom he seemed to have been very fond. His previous sexual development appeared to have no bearing on his present difficulties. He was a volunteer in the army and served two complete enlistments with good records. During the war he participated in the Saint-Mihiel drive. There he was gassed and sustained a slight shrapnel wound which was taken care of at a dressing station.

The symptoms of which he now complained had persisted unabated for seven years after his original injury, despite repeated attempts at treatment. The symptoms were as follows: He was subject to dizzy spells, periods of confusion, occasional fainting spells, and shortness of breath. The patient's greatest complaint was, however, the loss of his former evenness of temper and gentle disposition. He stated that he would lose control of his temper easily, pick quarrels on the slightest provocation, was threatening and abusive upon small cause, got into arguments, was very irritable, and reacted violently to any environmental physical pain or stimulus which annoyed him. His symptoms had interfered with his efficiency and comfort to a marked

extent. He had also had dreams frequently. Their content was: a) that dead people were speaking to him; b) that he was either attacking or being attacked; c) that he was falling; d) that he was drowning; e) that he was being run over by trains; f) that he was being bitten by snakes, and so on.

The patient stated that during the past seven years certain changes had taken place in his symptoms. Whereas he was formerly subject to frequent fainting spells, these were now almost entirely displaced by attacks of vertigo. Formerly the attacks of vertigo always preceded the spells of unconsciousness. In other words, the dizziness of which he now complained had been, heretofore, the aura of his fainting spells. It now became his chief symptom. The patient spontaneously realized that these spells of vertigo were frequently precipitated, though not always, by certain stimuli in the environment. Again, they bore a very striking resemblance to the occasion on which he originally lost consciousness in battle, namely, volatile odors; ether, chloroform, and gasoline used to provoke either dizziness or faintness. Thus the patient had to give up positions in which he was exposed to irritating odors. He took work as a starter for a taxicab company but gave it up because of his standing near a group of automobiles which continually exuded gasoline odors. Loud noises did not seem to provoke his attacks; but continuous stimuli of any kind, sometimes in the shape of persistent noises, made him irritable and aggressive.

It was quite natural, in this case, to find that the patient had been gassed on the battlefield in the following way. He was in a gas barrage, and his mask evidently had a leak. He remembered feeling, at first, rapid pulse and then dizziness; then everything became dark, and unconsciousness ensued. He awoke in the hospital after an unconscionable time. An important fact in this case was that the patient did not stress the attacks of vertigo and fainting as the main symptoms. What most distressed him was his irritability and his aggressive tendencies. He stated: "I now have a very bad temper, and I will tell you what I am accustomed to doing. Once while working, the foreman said something to me; I got into an argument with him and picked up a crowbar and went after him. I dropped the bar, but I used my fists, so that I knocked him unconscious; and I ran away and never

came back." The patient, deploring his state of mind profoundly, said that he feared he might kill somebody in one of these fits of anger when he really did not desire it.

The repetition mechanism was easily understood by the patient, although after several months' treatment the spells of dizziness still occurred. However, the dreams which used to disturb his sleep ceased almost entirely. No changes were effected in his temper. He was still irascible and violent. He was able to work steadily for some time, however. He had no anxieties, no conscious representations of fear, and practically no transference symptoms.

The case also illustrates an important fact, that the unconsciousness may be replaced by one of its prodromal symptoms, the aura. In other words the spell is inhibited at the aura. This is seen only in chronic cases and usually goes with improvement in the patient's condition.

The second point of orientation in this group of cases is the presence of and disposition to anxiety. The anxiety problem, from a clinical point of view, has an important bearing on the prognosis and therapy of the case. The manifestations of anxiety vary widely. Very few of these cases complain of phobias, and even when they do, the phobia never has the organization or the elaborate ramifications it has in the transference neuroses. As a rule, the patients are subject to vague unmotivated anxieties, and one usually hears great emphasis placed on the somatic accompaniments. It appears erroneous to call this state one of anxiety; it is much more a state of defense and expectancy, in which much of the emphasis goes to create adequate defense against its emergence. Neurotic phobias, such as those encountered in transference neuroses, are absent. I can recall only about three cases of a very large number who feared epilepsy, insanity, or heart disease. Of these phobias, claustrophobia was the most common; but, as a rule, the claustrophobia was more in the nature of a conditioned response than a displacement symbol. I have noted earlier in the chapter a case in which the patient had a phobia that New York would be visited by an earthquake. This was not so much a symbol of his traumatic experience as his direct fear of a recurrence: he was buried in a trench. This particular type of anxiety in a displaceable form is rare among patients showing the epileptic symptom complex.

A not infrequent form which the anxiety takes is the fear of the unconscious spell itself, a fear similar to those encountered among the "Aktualneurosen" of peacetime. The only connotation of the fear is a dread of impending death. Occasionally some of these patients displace their anxiety in the form of a fear of high places. Many of them have anxieties after their seizures. The anxieties, on these occasions, most frequently concern the seizure itself, a dreaded recurrence, and include the fear of leaving the house lest an attack overtake them in an unprotected place.

A convenient place to look for the evidence of anxiety, in these cases, is in their dream life. All of them, excepting only those in whom the clinical pictures cannot be differentiated from essential epilepsy, have the typical dreams of the traumatic neurotic, in which they are being annihilated in one way or another and from which they awaken in terror. In cases which resemble epilepsy clinically, one usually elicits a history of having had such dreams over a long period of time, but of the dreams' having since ceased. Others will say that, whereas they have dreams of this type, they no longer awaken from such dreams. As a rule, patients subject to these horrible nightmares have some representations of the anxiety in their waking life. The anxiety can usually be revived. When these dreams have completely ceased, the patient shows an apathy to his spells of unconsciousness and a lack of interest in his rehabilitation and cure, which is equaled only by the true epileptic. The disposition of the anxiety is an important theoretical consideration to which we shall return again.

In this group of cases lies one further point of differentiation. Some patients, in their unconscious state, relive their traumatic experiences; others have the typical kind of tonic and clonic convulsions seen in essential epilepsy. The following case is of interest because it shows one of the types of traumatic neurosis allied to epilepsy. It manifests in a very marked manner the fear of the environment, the sado-masochistic conflict, the presence of intense anxiety during spells, and the fact that anxieties may at times entirely displace the spells of unconsciousness.

The patient reveals this type with aura, anxieties, displacements, and ability to transfer repressed anxiety.

Case 19. The patient, first seen in March, 1924, was thirty-six years old, and was born in the United States. He stated that prior to the onset of his present illness he had never had a nervous symptom. He was brought up in a rural environment and was an active individual. Before service he had become connected with the motion picture business as director for a small firm. During service he was a private. He once suffered concussion by a shell and spent six months in the hospital.

His chief complaint was unconscious spells at intervals varying from one month to three or four. Their onset was not abrupt; in fact, loss of consciousness was always gradual, usually accompanied by an aura which the patient identified as the sound of barrage. The external environment gradually became feebler in outline, the detonation of his auditory aura more and more violent; panic seized him; he felt as though he were about to die and very often lapsed into unconsciousness. In most instances this was accompanied by violent fear and a struggle to emerge from this state; occasionally he succeeded, but more often he succumbed. He sometimes relaxed his sphincters. He did not know whether or not he had convulsions. He had been told that he lay limp. He awakened from these spells with a feeling of exhaustion and panic and did not recover from this sensation for days. After the spell he usually had a fear of going out of the house and a marked sensitivity to noise, an extreme irritability, and so on.

Occasionally the spell was provoked by some incident in the environment, and on two occasions the incident was very characteristic. He was sitting in a restaurant, his mind unoccupied and in a rather indolent mood. Two things occurred simultaneously. He was watching the man behind the counter cut a piece of meat. The idea of cutting, that is—that something was being cut—was associated in his mind with a great deal of panic. As he was thinking of this, somebody dropped a cup and saucer on the floor, whereupon the patient gradually lapsed into unconsciousness and had to be carried home. When asked to describe this spell, he said that it was not accompanied by the aura of a barrage but that the idea of cutting was painful to him; that was all he could remember. Loud noises occasionally threw him into a spell and often accidents that “almost happened” on the

street threw him into similar panics. When the patient was asked to describe the struggle against the spells, he said, "It is like struggling against death." This is a common expression used by soldiers suffering from this condition.

The patient had almost a complete amnesia for the events concerning his original trauma. He stated that he was on an ammunition train at about two o'clock in the morning and was waiting for a barrage to quiet down. He remembered that a shell came across, striking somewhere in his vicinity; nothing further could be recalled by him until he woke up in the field hospital where he was being treated by a physician. While in a hospital as a shellshocked victim, he had his first fainting spell some weeks after the shock.

As a result of these spells, the patient felt insecure and was not able to keep any permanent occupation. The spells seemed to come more frequently when he was at work than at any other time. Extremely affable and agreeable, he showed no outward signs of irritability. However, loud and unexpected noises would excite him. Of the transference symptoms, the chief was agoraphobia, together with claustrophobia.

He was under observation for over a year. During this interval he had about six spells, some of them very severe. Abreaction to the original trauma was not very successful, although when the incident was revived, the patient had a good deal more anxiety than formerly. During intervals between the attacks he was entirely free from fears or anxieties associated with his spells. He had some transference symptoms in the form of fear of crowds, subway, noise, and large buildings.

The patient was observed in one of his spells by some friends to whom he was talking. He became weak; his forehead began to perspire; he became panicky, fell down on his knees, heard a noise of barrage, and lost consciousness. His friends related to him that during the attack he did not froth but that he trembled all over and shouted, "Look out! Look out!"

Also interesting to note is that this patient never had any of the typical dreams of the traumatic neurotic but that he frequently awoke from his sleep with a start. He remembers none of the content of

his dreams. Possibly the ease of displacement renders these anxiety dreams less insistent.

The following case is of chief interest because it demonstrates a type of epileptoid reaction following upon traumatic events with the usual secondary features of irritability, aggressiveness, and something resembling deterioration.

Case 20. The patient was thirty-one years old. From several members of his family it was ascertained, as far as they knew, that he was a normal person prior to service. He was never very enterprising or active, and from his own accounts had a marked apathy in his dealings with women. He was never in love with any of them, but he had been accustomed to a heterosexual life since his early twenties. He had no severe masturbation conflict. The patient was never fearful in situations of real danger, and in service he was an unusually brave soldier. His long career of exposure to severe shelling had not undermined his confidence or bravery.

It is opportune in this case to describe a feature very commonly found in those complaining of syncopal attacks. His gait was fairly steady, but he had a rigidity in his carriage. This stiffness was most pronounced in the movements of the head, motions executed with rigidity and slowness, at least half as rapidly as in the normal individual. This rigidity of posture was most conspicuous when he was executing movements attendant upon stimuli. The eyes would move in the direction of the stimulus, but the head would not follow the eyes. Moreover, he had a marked absence of the facial mimicry associated with emotional expression, a parkinsonian facies. Here the petrified blankness was most pronounced. Vocal inflections conveying the usual feeling tones were likewise diminished in excursion and intensity, a general characteristic of all these cases. Though I treated this patient for over three years, I never heard him laugh aloud, and his smile was generally stiff and forced.

He complained of spells of unconsciousness at intervals, varying in duration from two days to several months. These spells were preceded by intense vertigo, initiated at times by an aura of sparks in front of the eyes but more frequently by nothing at all. He fell down pre-

capitately, occasionally hurting himself. He made twitching movements with his extremities, did not bite his tongue nor relax his sphincters, but frothed at the mouth. After the spells he sometimes felt drowsy and went to sleep. He also complained of severe headaches, persistent dizziness, extreme irritability, attacks of violent temper, tantrums, assaultiveness, and marked sensitivity to noise.

When the patient was first seen, he had the usual stony, parkinsonian masklike expression on his face. Feeling or emotions did not seem to disturb the immobility of the facial muscles. He came into the room limply, sat down on a chair, and made no spontaneous statements. He answered in monosyllables: "Yes" or "No," and so on. His behavior was very rigid. He would look out of the corner of his eyes rather than turn his head. He hardly looked round the room to notice any of the objects in it. Conversation held no feeling of contact or interest for him; he was completely detached. However, any noise that occurred or any monotonous stimulus, like the tapping of the pencil on the table, made him extremely irritable. After he had been under treatment for some time, the expression of his face relaxed and became more mobile. He appeared more interested; he smiled occasionally and seemed to be less fearful of his environment.

His stream of thought was always relevant and coherent. His associations were extremely shallow, but whenever any stimulus arose, he would make an association and then stop. The following is quite typical. The patient brought a dream, which will subsequently be described in detail. The chief subject of the dream was sand. He was asked to associate subjects with the idea, and the only reply obtained by me was, "I don't know." After much prompting and urging he could only say, "Sand is what we find on the seashore." Whenever he was asked to describe some of the details of the day's events, he would do so in the most cursory manner, something to the effect of, "I got up in the morning; I walked around; and at night I went to sleep." After some urging he might inject another detail, stating that he went to the movies. He seemed utterly impervious to any of the things in his environment. They seemed to make no impression. He had no trends, worries, or concerns, except that he wanted to get well.

The patient denied having had, at any time of his life, spells of any description. This statement was corroborated by his sister, considerably older than himself. Neither could she describe any traits indicating an epileptic tendency. The patient himself, however, stated that after he had been in service for some time, he had several minor spells of unconsciousness, one after a severe gastric disturbance and another when he was accidentally struck on the face. But he remembers that these were not complete lapses of consciousness and were nothing like the spells of which he subsequently complained.

The first real major spell occurred in the Belleau Woods. The patient was in an engagement and was surprised by a shell exploding near him, near enough to tear his clothes and frighten him badly. However, he was able to go on fighting just the same. Several days later another shell came over, and this time he was actually lifted into the air and was unconscious for an indefinite period. All he remembered was waking up in a hospital, a three-day journey distant from the place where the shell exploded, altogether representing an interval of six days or more during which he was completely oblivious to his environment. He said that he was "paralyzed" for a month from the head down, that he could not move any of his limbs, and that he stammered intermittently. After a month the patient was able to move a bit; after two months he was able to get around on crutches. He then began to show all the symptoms of which he now complained. He was very fearful, especially of noise; the slightest movement of any object in the room would be enough to throw him into a fit. Any sudden stimulus, such as someone's touching him on the back or suddenly passing him by, would throw him into a state of complete unconsciousness. When he was prepared for the stimulus, he did not mind it nearly so much. He remembered also having been tube-fed in the hospital because he could not swallow. He occasionally would have fits as a result of gastric disorders after the spells.

These spells continued up to the time of examination, a period stretching over seven years. There was frequently no aura, but sometimes dizziness. Sometimes the aura would be a rotating wheel; sometimes color hallucinations, which occurred without loss of con-

sciousness. "But when I saw black, I would always go off." He often imagined that the sidewalk was coming up to meet him. Trying to protect himself from danger by grabbing a near-by object, he would fall down. His sister volunteered the information that frequently in these spells the patient would say things about the war, such as: "Go and get 'em;" "kill 'em;" and so on. Concerning the dizziness, the patient stated that it was common and often merged into a spell of unconsciousness. He described the dizziness as a sensation of being revolved in a chair. During these dizzy spells he saw blotches of color—purple, red, green, and sometimes black.

The irritability was constant and usually directed toward loud noises or unexpected stimuli of some kind. Closely related to this irritability was the aggressiveness which the patient described as an entirely new trait and one foreign to him before the onset of his illness. His aggression was very frequent in his sleep. He knew this from the fact that his brother, with whom he used to sleep, would frequently wake him up with the query, "Whom are you fighting with?" or "What are you fighting about?" And on many occasions he struck his brother in his sleep. This aggressiveness would frequently occur after his spells, when he would be seized with a desire to fight and to break up objects in the room. His sister stated that he had smashed many articles of furniture and innumerable dishes. According to the patient, these aggressive impulses were not preceded by anger.

The dream life of this patient was typical of the traumatic neurotic, but it also showed some new interesting features. As usual, the dreams were concerned with fighting or with being attacked. Their content varied: dreams of falling, burning, drowning, being electrocuted, reproductions of war scenes. He used to remember his dreams vividly, but now he remembered very few of them. Only after a great deal of effort could some of his dreams be collected. The dreams of this patient dealt with the "sado-masochistic" conflict but were almost entirely concerned with being annihilated. During periods in which the patient was relatively free from symptoms, he would have dreams in which he was the aggressor. "I dreamed I was fencing with someone, and I stabbed him." He would awake frightened.

The anxiety problem in this case is of great interest. The dreams all indicate a marked activity of anxiety which, however, the patient was incapable of displacing on any situation in the outside world. He had no anxiety except that associated, in a general way, with the feeling of being killed if he had a spell in a dangerous situation. Aside from this was no conscious representation of anxiety. The patient had no agoraphobia. He would spontaneously avoid exposing himself to danger. The violent anxiety from which he would start in his dreams would not disturb him in his waking life. For short periods after waking from his dreams, he would have transient fear of the dark, fear of loud noises, fear of burglars, and so on; but this seldom lasted more than a few minutes, and then he would promptly go to sleep again, only to be awakened by another dream of the same kind.

The relationship between the anxiety and the loss of consciousness was explained to the patient, and he was urged to anticipate the attacks of unconsciousness by actually fearing them. After considerable persuasion, the patient brought certain phenomena to indicate that the anxiety so active in his unconscious could be brought into closer relation with his spells of unconsciousness. He came to the clinic very excited, apprehensive, fearful, and trembling and stated that for the past four days he had been in a constant state of apprehension but that it was not displaced upon any situation in the external world. It was, however, displaced upon his spells. Thereupon the patient recalled that he had, on many occasions, been in apprehensive states during the past seven years but had feared nothing in particular. It had never formulated itself as a definite phobia. Moreover, he said, the presence of these anxieties did not guarantee or prevent the occurrence of his spells, because he would frequently go from one of his anxiety states directly into one of his spells. Several days later the patient brought an interesting phenomenon. He was awakened by one of his typical dreams and switched on the light to get a pencil to describe his dream, as he would otherwise completely forget it. He remembered nothing beyond switching on the light; he then went into a spell. In short, an attempt to bind the anxiety to a special situation failed. Certainly the inability to make transference to the outer world was responsible not only for the fact that the patient had no

phobia but that the spells persisted in their original form, together with these violent dreams. In these dreams repressed anxiety continually emerged in conjunction with the original situation but left no trace in his conscious life.

Although prior to service a steady and industrious worker, he had not been able since service to apply himself to any work. Whatever interests he showed on fleeting occasions were directed along mechanical lines. He had several times attempted to devise various implements of a mechanical nature, usually labor-saving devices. The patient could not work because he could take no interest in any activity. As he put it, "Whenever I make any attempt to work, I am thrown into spells more frequently." Other features of this case have been reserved for later treatment.

The following case is an excellent demonstration of epileptoid reaction to a traumatic situation. The interesting feature in it is that anxiety dreams and all conscious traces of anxiety have completely disappeared. There are no transference symptoms, and all consequent spells are unusually severe and persistent.

Case 21. The patient, now thirty-three years old, had been under more or less constant treatment for about eight years and hitherto had noted practically no improvement in his condition. He had absolutely no history of convulsions or of fainting spells at any time in his life. Not a neurotic child, he was not afraid of the dark and had no animal phobias. In childhood he was a sociable, affable boy, fond of sports appropriate for his age. He was not subject to tantrums or severe states of obstinacy. At the age of seventeen he hurt his left elbow when he was injured by a streetcar. No after effects were noted. His love life developed in a normal way.

After a brief training in the United States, he was sent abroad. He was just preparing to enter the front lines when he received a small shrapnel wound in the thigh. He stated that at this time he was not particularly apprehensive or fearful in any way and did not take his wound seriously. He was sent to an English field hospital. On the evening of the day he was wounded, the patient was napping in the hospital when an airplane dropped a bomb on it, and the patient was "blown up."

The next thing he could recall is his waking up in Boulogne a long time afterwards. He could not talk, he was all tremulous, and his feet would not support him. During this period the patient did not maintain consciousness continuously, but kept "dipping"—that is, intermittently he kept lapsing back into a state of unconsciousness. He had to be confined for a long period in a padded cell or strait jacket. For this period the patient had now almost a complete amnesia and a well-marked resistance to talking about anything connected with it. His conduct during this time was evidently delirious. How long these states of unconsciousness continued, the patient does not know; but when he was finally able to maintain consciousness, he stammered, trembled, was subject to anxiety dreams pertaining chiefly to airplanes flying over his head, was very sensitive to loud noises and abrupt stimuli. This condition remained up to the present time.

When he came to the clinic, his symptoms were periodic spells of unconsciousness, sensitivity to noise, inability to apply himself to work, and restlessness. He had no transference symptoms of any kind, did not fear riding in the subway except that he did not like the noise, had no phobias of any description, no anxieties, no anxiety dreams.

The patient was observed in one of his spells in which the following occurred. The spells were always preceded by headaches which "began low down in his spine and traveled up" and which were very severe in character, more like muscular cramps of the neck muscles. The first thing he noticed was the inability to maintain a forward position of the neck. The patient became cyanotic, losing consciousness at the time, but was able to perform voluntary movements. On one occasion, during this phase, the patient was able to walk about twenty paces to a seat. The next phase of a spell was an outburst of violence; the patient threw up his hands, fell to the floor, but did not have convulsions. The movements seemed to be coördinate and very like the movements of a person fighting someone. This phase lasted for about two or three minutes, during which time his fists were clenched and he was striking and tearing violently while on the floor. There would be occasional relaxation of the sphincters; sometimes he would bite his tongue. Frequently during this phase the patient would break

and tear objects around the house; he broke many chairs, tore up sheets and pillows, but never harmed any person or injured himself.

After this violence had subsided, he lay mumbling with his eyes open but did not hear anything said to him. When he was touched, he made defense movements; in fact, he was hypersensitive to this type of stimulus. Some time after this subsided, the patient made some remarks or inquiries concerning his whereabouts and concerning some member of his family. He had no persistent aura, and the attacks occurred at intervals varying between one to three weeks. His stammering had continued unchanged for the past three years.

The patient's lack of emotion concerning the original trauma was unusual. He related it as a matter of course. During the entire period of treatment it was impossible to reactivate any anxiety in connection with the original accident. However, he showed unusual strength and emphatically refused to enter into any discussions about it, although he denied that such discussion would be painful for him. In other words, the original trauma and all its secondary ramifications seemed to be entirely encapsulated and to have no apparent connection with the patient's other psychic spheres. The prognosis, therefore, appeared to be practically hopeless, since no bridge remained between the patient's conscious life and the activity of the trauma in unconsciousness. It must be noted that the secondary so frequently found in these cases, namely, the withdrawal of interest from the outside world and from other people—particular members of his family—were very much less marked than is customary in these cases. He was intensely devoted to his wife and child and was extremely tender, never showing any signs of irascibility or temper toward them. Toward the physician he never assumed an attitude of dependence, and hence anything in the nature of a transference was impossible.

The following case is a typical case of epilepsy developed after a traumatic event and difficult to differentiate from essential epilepsy.

Case 22. The patient was thirty-two years old. The chief complaint he presented was spells of unconsciousness. These spells corresponded, in every detail, to those of essential epilepsy. He had an occasional

aura in the form of pain in his chest. He would fall abruptly, frequently cutting and injuring himself. His convulsions were typical. Several were observed in the clinic. He would not always relax his sphincters but would bite his tongue. The spell was invariably followed by a stuporous sleep of variable duration. The first of these spells occurred while he was in a hospital convalescing from a shrapnel wound in his left buttock and an attack of gassing. The patient stated that he was "knocked out on the battlefield." He gained consciousness in the hospital. Originally, he stated, he had the typical war neurotic phenomenon of dreams of the war scenes from which he would wake in great fright. He used to remember some of these dreams, but they had become so stereotyped that he no longer remembered their content. However, they were infrequent at the present time, although originally they occurred night after night.

The patient had some fears, but they were secondary to his all-important spells. He feared riding in the subway. Because he feared the oncome of a subsequent attack, he carefully avoided exposing himself to any danger. This type of fear is frequently found in true epilepsy. The spells were not accompanied by anxiety, and at the present time there existed almost no representation of the consciousness of fear or anxiety. There was no evidence of deterioration. The patient's affect was entirely normal toward his illness.

He showed some typical features of epilepsy. He was hard, rigid, immobile. He had no conversation; he volunteered no information. His illness, had, however, few displacements, with no evidence of conscious conflict. When he talked about his former anxiety dreams, he usually laughed them off, saying, "Oh, they used to be terrible, but I am so familiar with them now, I don't mind them."

From his history it was difficult to decide whether or not the patient lost consciousness on the occasion of his original trauma. His first attack in the hospital was not a convulsion but an attack of acute excitement, during which he ran out of bed, tore his clothes, smashed the furniture, and had to be led back and tied to the bed. The attacks which followed, however, were true convulsions.

His dreams were typical of traumatic neurosis: being attacked, trampled on, electrocuted, drowned, and so on. During his seizures he would wet the bed occasionally.

The above presented case is that of a typical epileptic who, although his illness was eight years old, did not show any sign of deterioration. He had no auras preceding his seizures, and no neurotic displacements of any kind. He had a rational fear that something might happen to him in one of his spells; he continued to have some disturbing dreams, not unlike those frequently encountered in essential epilepsy without traumatic provocation.

In order to demonstrate the independence of the resulting symptoms from the character of the traumatic experience, organic or otherwise, I have selected two cases, one of which followed a fractured skull. The other was unprovoked by any trauma in the ordinary, accepted sense of the word.

The interesting point in this case is that "fractured skull" was the diagnosis made on his original condition.

Case 23. The patient's previous life was uneventful. In Siberia he had a prank played on him. He was awakened in the morning and tossed up and down in a blanket in his nightclothes. Falling out of the blanket, he landed on his head and was in a state of unconsciousness for about a month. He had a complete amnesia for all the events preceding the accident. The story, as he now told it, was reconstructed by the patient from fragments related to him. During the month of unconsciousness he was said to have set fire to the hospital several times. Since then, the patient had been subject to lapses of unconsciousness lasting for twelve hours to eleven days. He was later told that he was taken to a hospital and that he was fully awake during these lapses, was active, smoked, read, and talked but was not his conscious self. He was also told that he did not appear to be his "right mind." These major lapses of unconsciousness occurred at intervals for five years. Since that time he had had only minor ones. They usually began with a feeling of paralysis in one extremity, either an arm or a leg. Sometimes it was only an attack of vertigo.

The only other symptom elicited was a compulsive urge to attack or strike people. He could not stand on high places or ride horses; he had a compulsion to jump from high places. He never had transference symptoms nor the usual type of annihilation dream. More recently he had been subject to transient spells of blindness which

lasted four or five minutes. When he was well, the patient went about his activities.

The loss of consciousness, transient blindness, and amnesias are quite like those in true traumatic functional cases. The sadomasochistic conflict is also present in the form of a compulsion to strike people.

The following case is of interest because it demonstrates to what extent the symptoms of true epilepsy may resemble those of traumatic neurosis.

Case 24. The patient was twenty-seven years old. In 1918, while on duty, the patient was in the kitchen with five other men when the shack they occupied was struck by lightning. All of them were dazed. He alleged that his own dazed state lasted only two or three minutes. During this time he did not know where he was, nor had he any idea of what had occurred. Although he had no pain or sensation of any kind accompanying the shock, his arms and legs were discolored and blue. He was given some form of physiotherapy, and the discoloration disappeared after a few hours. Within two hours after the accident he was as normal as ever before. He did not recall that he suffered from disturbances of sleep.

Within a short time the patient began to have symptoms referable to his gastrointestinal tract. Severe pains sometimes "doubled him in two." It was diagnosed as "acute appendicitis," and he was operated upon. His hospitalization lasted for thirty-six days, his convalescence being uneventful except for a superficial opening of the wound. He did not fear the operation, he stated.

About a year and a half later he began to have a repetition of the symptoms which initiated his acute appendicitis, the severe pain, and so forth. On one such occasion this pain attacked him on the street; he lost consciousness and was brought home by some strangers. He was told by an observer that during this spell he dug his nails into his stomach. Since then these spells recurred on an average of two or three times a week. At first they were preceded by the characteristic aura of gastric colic; after two years this aura disappeared, and his loss of consciousness came abruptly. With regard to these spells, he did not know just how long they lasted, whether or not he relaxed his

sphincters, bit his tongue, or whether or not the convulsions were tonic and clonic in character.

About a year after his first spell, the patient began to suffer from a disturbance of sleep. He would have difficulty falling asleep; the slightest noise would awaken him. After such an awakening he could not get any sleep for the remainder of the night. He became particularly sensitive to loud noises during the day.

About 1921 he began to have the typical "sadosomachistic" dreams—being trapped by fire, being chased by someone, fighting, being beaten and annihilated. Often his sleep was disturbed two or three times during the night. Of late, although these dreams continued, he had so learned to control his sleep that he did not awaken. However, on awakening he often found that he had been injured during his sleep. His spells were often nocturnal, passing from a dream into a spell. He shouted, struck the wall and the bed, and was usually bruised on the head and arms.

During the day he suffered from spells of dizziness with black blotches in front of his eyes. These spells occurred sometimes as often as three or four times during one day. They occurred especially when he made a sudden move, got up out of a chair, bent over or stood up from a reclining position; in fact, any and every locomotor change affected him similarly. He was not sensitive to loud noise in the daytime.

Another important change in his character was his extreme irritability. "If things do not suit me, I get very crabby. I must have my own way." He also suffered from amnesic states and had been apprehended by the police several times. The last incident was probably typical. He remembered leaving the office at six o'clock but had no recollection of where he went. He kept on walking, was found by an officer, and sent home. He had often been found fifteen or twenty miles away from his home. His behavior after his spell was noteworthy. His limbs ached, he was disorientated, and he had a desire to sleep. Somnambulistic states were a frequent occurrence with him, that is, the psychic equivalent.

Very sensitive to the sight of suffering, the patient could not bear seeing others injured or hurt. He had no transference symptoms, no

anxieties of any kind, and was not fearful of any situation, such as theatre or subway. He was also not afraid of the consequences of his spells. As far as he knew, he was not more religious than formerly and was not dishonest or selfish.

This is a case of essential epilepsy, the chief interest of which lies in the similarity between it and typical cases of traumatic neuroses. The aura which initiated his attacks was a distinct reference to a traumatic experience, the symptom which initiated an organic illness. Of course, another and more likely interpretation is that the patient never really had appendicitis and that the gastric symptoms were the result of a spasmophilic crisis, so often found in isolated forms of traumatic neuroses. This aura has since disappeared, and the only trace of anxiety is to be found in his dreams. The diagnosis of epilepsy is confirmed by the absence of transference symptoms and the presence of somnambulism, twilight states, and amnesias. During his hospital residence he complained chiefly of headache and dizziness lasting for days at one stretch. He would wear an agonized expression all this time. He was observed in one of these states to be cyanotic and rigid but without complete loss of consciousness.

The "epileptic character," so-called in this case, appears to be entirely lacking. His past history does not bring out any tantrums, intolerance, impatience, egocentricity, overscrupulousness, or religiosity. His behavior during observation showed these traits to be completely absent. Neither was he obliging to a saccharine degree as many of these epileptics are. His intelligence was not as keen as it had formerly been, and his emotional tone was decidedly low. He spoke with very little force, was pleasant, though not particularly engaging. His attitude toward work was normal, although when he did work, his spells occurred much more frequently.

SUMMARY

A traumatic experience can precipitate any of the well-known types of neurotic or psychotic disorders. However, irrespective of the nature of the resulting clinical picture, there are always the distinctive features of the traumatic neurosis.

The presenting symptoms of this neurosis vary according to the time of observation. There are acute, transitional and stabilized forms. The type which stabilizes most rapidly is the one concerned with sensory-motor disturbances. The other stabilized forms vary only in the degree to which one feature is emphasized over another. In some cases—the defensive ceremonials—the organization of the neurosis is very high. In others the sensory-motor phenomena predominate; in still others autonomic, or epileptiform phenomena occupy the façade. It often happens that the emphasis will shift in the same case from epileptiform to autonomic symptoms. The neurosis also brings with it certain definite alterations in the character of the subject, and this change is almost uniform, irrespective of the symptomatology. The one exception to this occurs in those cases with motor paralyses. The combination of a varying symptomatology with a uniform alteration in the character of the subject indicates a neurotic process which can be studied systematically.

III. ANALYSIS OF THE SYMPTOMATOLOGY

OUR FIRST PROBLEM is to decide what kind of entity the traumatic neurosis is. To this end a comparison with hysteria and compulsion neurosis would be helpful. These latter neuroses deal with certain unsuccessful types of integration, some of which constitute the *character* of the individual and others which terminate as symptoms. The most noteworthy feature of these character traits and symptoms is their interrelation. Moreover, both character traits and hysterical symptoms are related to definite aspects of the personality—those aspects of adaptation which deal with relations to others; attitudes to oneself; problems of status, connected with the question, “What do I think of myself?”; and finally, certain drives toward satisfaction of biologically determined needs—sexual—and those determined by social values,—prestige.

To anyone acquainted with the clinical manifestation of the hysterias, obsessional neurosis and character disturbances, the contrast of these traumatic neuroses is very striking. We have already pointed out the lack of displacement phenomena, a fact seeming to indicate that the psychic elaborations of the forces creating the symptoms is very poor. And this in turn would lead us to suppose that aspects of adaptation not involved in the hysterias and obsessional neuroses are touched on. If this is the case, we must proceed at once to examine the nature of the traumatic experience.

WAR AND THE TRAUMATIC SITUATION

One of the facts clearly established by the clinical phenomena is that the symptoms make a series, many features of which can be found in all cases, irrespective of the nature or severity of the traumatic experience. We are, therefore, dealing with specific reaction types which are responses to an alteration of the entire problem of adaptation. What, then, is the nature of “trauma” which ushers in these altered forms of adaptation?

Certainly the war situation—particularly modern warfare—creates these traumatic situations¹ more frequently than peacetime conditions. Even when the finer differential diagnosis of traumatic neurosis was not known, certain sequelae of war could always be noted. Thus Awto-kratow (12) reports that one of the most noteworthy consequences of the Russo-Japanese conflict was the inordinately high increase in epilepsy.

The war situation definitely contributes to the frequency of incidence of traumatic neuroses and allied diseases and is undoubtedly responsible for the difference in character between these neuroses and those which occur in peace time in a more attenuated form.

Modern war has introduced certain conditions conducive to neuroses in those so predisposed. The resulting traumatic situations are more numerous. This above-mentioned high incidence of postwar epilepsy is due entirely to the epileptoid character often assumed by the traumatic neuroses. The use of high explosives, gas, submarine, airplane makes the dangerous situations in modern warfare more frequent and more difficult to escape. These unprecedented and horrible situations in modern warfare, as is reasonably believable, have some direct relation to the severity of the neuroses that ensue; some traumatic situations are more conducive to violent neurotic types than others. One cannot, however, but feel that the war situation, with all the accompanying horrors, rather colors the intensity of the neurosis than gives it its essential character. This follows from the fact that the traumatic neurosis is primarily a fixation phenomenon, accompanied by repetitive process, with a group of secondary defense mechanisms. A patient blown up by a shell and remaining unconscious for forty-eight hours is more likely, in the ensuing neurosis, to have symptoms which reproduce certain conditions of the original trauma than is a man exposed to a whole series of petty insults.

¹ A neurosis named after the situation which provokes it, rather than from some general characteristic of the reaction, is misleading. This we shall try to remedy. Meanwhile, we must preserve the name "traumatic," and use it to cover all those syndromes which are variously designated according to the provoking situation, as was the case with "shell shock," lightning neurosis, railroad spine, etc.; or according to the specialist to whom the case was assigned, depending on the nature of the presenting symptom, *e.g.*, neurocirculatory aesthenia, autonomic imbalance, etc.

Thus, while the war cannot be said to have produced any specific neuroses, the modern military situation with its inexorable weapons creates more difficult situations to escape and thus activates disorganization of the ego. But a direct continuity exists, as we shall see, between the mildest and the most severe of these reaction types.

Another situation concerning the late war, that is, the issue of post-war compensation, also conduces to the special character of the chronic forms. This compensation becomes an overt secondary gain of illness. But even here, it may be anticipated, the indemnification issue does not in any way create the neurosis. The demand for and the dependency upon compensation is an essential and unconsciously determined defense mechanism and cannot be considered a prime factor, although it is often an obstinate source of resistance in treatment and rehabilitation. As a matter of fact, this situation is not restricted to war. Hardly a civilian situation exists in which traumatic neurosis is not complicated by the issue of compensation for damages.

Although peacetime traumatic neuroses may differ in no qualitative manner from those encountered in the war, several conditions prevailing in the war situation and absent in peace may, in those so disposed, make the neurosis easier to become stabilized. These factors deserve consideration as quantitative and aggravating rather than causative agents, though their exact effect on the intensity and frequency of the neurosis is indeterminable.

On superficial examination, so far as the "instinct" life of the individual is concerned, the war situation is very different from that of peace. Perhaps the most striking dissimilarity lies in the apparent difference of the goal of activity. The general assumption is that the goal of activity in war is the annihilation of the enemy and the preservation of self. This is apparently a wide departure from the goals and the pursuits of peacetime. But the difference diminishes on closer examination. The egoistic pursuits of peacetime are, for a large number of individuals, purely self-preservative in character. They are obliged to work in order to exist, and this statement becomes truer perhaps in proportion as the work involved is of a cruder character. In the case of peacetime pursuits, the self-preservative issue has no urgency and no immediate danger. It takes time to starve, and with our

modern social organization starvation becomes a rather difficult procedure. The self-preservative issue in peace is implied rather than apparent.

Our social organization has conferred upon the individual a high degree of culture and differentiation of activities (originally used to fight beasts and enemies) into the refinements of labor. On the surface these latter seem to make little claim upon the same elementary drives activated in the fighting of wild beasts and enemies. Social organization has removed some elements of immediate danger. It has made possible the remarkable and systematic conquest and exploitation of the physical environment and has thus transformed the primitive egoistic anxiety to the form of constructive work.

The state of war is therefore at the very outset an anxiety-provoking situation. Though similar to those of peacetime, the activities of war represent a stripping of the refinements built up by social organization, with the effect of releasing a great deal of anxiety in the form of fear of impending danger; thereby incurred is a greater burden upon those impulses which ordinarily find their outlet in the primitive fight against the environment.

In addition to this is another important consideration, namely, that the war situation strips the individual of the protections of peacetime activity. During the conditions of peacetime the work of the individual is regulated as regards intensity, duration, and character by certain conventions which rest eventually upon the essential and unalterable physiological characteristics of man. Thus, in peacetime, the hours of labor are regulated with due regard to the normal conditions of fatigue and the normal fluctuations of diurnal efficiency. Moreover, in peacetime the character of the work to be done is, to some extent, subject to individual option for the greater number of men. We need not emphasize the absence of sexual gratification in war, the paucity of entertainment, poor food, or unhygienic surroundings, all of which make the environmental conditions of war and the demands on the psychic organization of the soldier enormous.

A large number of the factors above considered—those regulating fatigue, efficiency, hygiene factors, and even sexual outlet—appear to be physiological rather than psychological problems. Yet although

the physiological hardships of warfare are undoubtedly alike for those who get neuroses and for those who do not, one is tempted, in this regard, to take issue with the point of view of the organicist who explains all these phenomena with the formula of "organic insufficiency." That is, a soldier is supposed to have an unstable autonomic system, therefore he succumbs to a neurotic disturbance involving the autonomic system. This type of explanation is one of the oldest and illustrates one of the most persistent of psychiatric forms of begging the question. Accordingly, the organicist explains the phenomena of a neurosis by the mere assumption of an unstable, inadequate, or inferior nervous system and postulates that the reactions resulting therefrom are psychological reactions to the inadequate functionings of these various systems. The fallacy of this argument can be understood by contrasting the following situations: When a person, through the urgency of the situation, is obliged to avoid a stronger adversary than himself and must continue to do so until he falls down exhausted, we have a phenomenon generally understood without more explanation. He reaches the limits of physiological endurance. This, we may say, represents primarily a physiological problem. But on the other hand, when such an individual continues to have the same symptoms of exhaustion, rapid pulse, easy fatigability, fainting spells, and epileptoid symptoms long after the urgent situation has ceased to exist, we have a right to question the belief that these symptoms are physiogenic. The fixation phenomenon, with all its psychological accompaniments of inhibition and reaction formation, ceases to be a physiological problem.

The problem of adaptation in the war situation is a wide departure from the conditions of peace. The soldier is, to be sure, a member of a group and is, to a variable extent, identified with the other members of it and with the nation and the cause for which the enterprise is launched. This latter feature, the identification of the individual with the cause of the war, is likely to be subject to a great deal of variation in modern wars, where conscription is the rule. The average soldier feels the war to be the seat of the danger. Rarely does he know or perceive the original causes of the war which is being waged, presumably, for his protection. He is seldom touched by these issues di-

rectly. He is much more touched and intimidated by the military regime, its rewards, and punishments. The extent to which the soldier can identify himself with the cause is important only insofar as it enables him to be interested in the activity. When the remote rewards of personal advantage are absent and the cause of the war is abstract patriotism and the supposedly hated qualities of the enemy and when he is held in check by a discipline more or less inflexible and inescapable, one must say that the soldier suffers in the modern war situation a privation hard to equal in any situation in civilian or even primitive life. Undoubtedly the ability to be interested in the activities of war depends, in part at least, on the narcissistic objectives which the individual soldier is able to anticipate. When war has the tangible objectives of profit, security, defense of an ideal, and rewards not too remote as far as the individual is concerned, it would be easier to endow the activity with interest. But in modern war this is possible to limited degree. A state of affairs exists very like that in modern industry. A man who works in a factory does not have the objective of the completed product of which he makes or adjusts a single part. He cannot have much "pride of workmanship." Such work is tedious, and the interest must be shifted entirely on the reward in the form of money. In war the enforced replacement of his own ego-ideal with that of the group precipitates an egoistic conflict of great violence and creates an ambivalence toward the group, at once as his persecutor and protector. The more completely the soldier is identified with the cause and the leaders and the more firmly he is bound by ties of interest to the group, the better able is he to take care of the unprecedented violence of the anxiety released by the war situation. A situation not dissimilar to this, although entirely lacking in urgency, exists in certain labor conditions of peacetime.

This, together with the fact that the violence of warfare creates conflicts which in peacetime must exist in lessened form, plus the urgency, the inescapable character, and the rapid succession of events—all of these conditions foster disorganized adaptation types which under ordinary civilian conditions cannot arise except in great public calamities like pogroms, extensive fires, earthquakes, tidal waves, volcanic eruptions, and so forth. War is therefore a situation which

necessitates radical changes in adaptation as compared with that of peacetime. However, none of these changes would be effectual without the actual traumatic situation which exists in the form of exposure to severe shocks and injury. It therefore becomes essential to define the concept trauma.

WHAT IS A TRAUMA?

Trauma means injury. When used in a psychological sense, this connotation of injury must be altered, for we must define what is injured; here we encounter some difficulty. Properly speaking we would say that an *adaptation* is injured, spoiled, disorganized, or shattered. We can also speak of an injury to the ego, merely another way of saying that adaptive processes are altered. A trauma cannot be defined either in terms of the provocation or the reaction to such provocation alone, but as a relationship between an external stimulus and the resources immediately available to adjust to, side-step, or otherwise master the stimulus. This is very different in the traumatic situation occasioned by an external stimulus as against one created by an autochthonous stimulus like wishes, urges, or drives from sexual sources. Among other things is a time factor, for most traumatic situations are sudden and overwhelming. Let us try this working definition of *trauma* on a few situations.

1. The act of attention.
2. Fatigue.
3. A sudden pain.
4. A slight accident.
5. A fractured skull.
6. Arteriosclerosis.
7. A brain tumor.

1. *An act of attention.* Perhaps all the situations mentioned in this list may be considered "traumatic," but why include the commonest phenomenon of conscious life in this category?—because it arrests an existing equilibrium, makes necessary a new adaptation, and sets the organism in a state of preparation for a new change in certain adjustive mechanisms. It narrows or focuses the field of consciousness

and is accompanied by some muscular immobilization which can be considered a preparation for new activity consequent upon the new perceptions involved. The immobilization phenomena are most conspicuous in the case of auditory stimuli, less so with visual, tactile, olfactory, and gustatory stimuli. Therefore an act of attention involves perceptual, coördinative, and executive capacities and is generally not traumatic because in most instances it leads to an adequate adaptation, whether it be flight from an offending stimulus or the solution of a mathematical problem. In many disorders of attention it is not difficult to trace the origin to anxiety, which means that the adjustments demanded are beyond the ready capacities of the individual.

Thus a boy of fourteen suffers from an inability to comprehend anything connected with algebra though his intelligence is otherwise average. The inability to be attentive to mathematics began with very early impressions about its difficulty. When it became necessary for him to do a mathematical problem, he became confused and anxious. His only adaptation was to ask someone to do it for him. His incapacity was an inhibition of attention premised by the unconscious idea, "I cannot do that," and it went to a complete paralysis of any executive capacities with respect to this circumscribed activity.

2. *Fatigue*. A more complicated picture is presented by *fatigue*. This phenomenon hardly corresponds to the general concept of trauma. The only reason to include it is that we stressed in our preliminary definition a reduction of resources. Many of the phenomena encountered in fatigue closely resemble those of the traumatic neurosis—the irritability, lack of coördination. The dream life of the fatigued shows some characteristic features which, though minus the catastrophic character of the traumatic neurosis, do show the inability to consummate effectively some activity like running but never reaching the destination. (See for further details pp. 88-89.)

3. *A sudden pain*. Let us now examine a phenomenon more obviously traumatic—a *sudden pain*. Many individuals under these conditions faint. This is a complete withdrawal reaction through cessation of consciousness. Other reactions are crying, jumping. If the pain is produced by an individual, some bit of aggression against the ob-

ject is most likely. In the case of fainting we have, therefore, instead of a tonic state of preparedness, a complete collapse of the whole perceptual and executive apparatus.

4. *A slight accident.* For the following case I am indebted to the late Dr. Monroe A. Meyer. It concerns a young woman, quite a normal individual. One day, while she was combing her hair in the bathroom, the flushing apparatus suddenly became dislocated and, as it fell, struck her a glancing blow on the shoulder. Though she was not hurt, the suddenness of the accident frightened her. She felt restless, uncomfortable, and could not pursue the normal routine of her daily activities. She lay down to rest but was "nervous," irritable, and apprehensive. She succeeded in falling asleep only to be awakened several times during the afternoon by dreams photographically repeating the incident of the bathroom. For several days she was somewhat "jumpy" and the dream recurred a few times; then it was completely forgotten.

5. *A fractured skull.* Another case concerns a man of twenty-six, struck in the left temporal region by a bus which suddenly swerved out of line. He lost consciousness and, when revived, noticed that five minutes had elapsed since the moment he was struck, for he had noticed the time a second or two before the accident. He noted also that he was bleeding from the left ear and, being a physician, thought that in all likelihood he had a fractured skull. He directed some people who picked him up to notify the friends expecting him for dinner and argued with the policeman about the hospital to which he was to be taken. He had his danger clearly in mind, knew all the symptoms he might expect as a result of a fractured skull, but was not panicky. When removed to the hospital of his choice and cared for by his own physician, he began to feel worse. He became mildly dazed and slightly stuporous, but when examined watched the neurological examination carefully. He inferred from the absence of a left abdominal reflex that he had a *contrecoup* laceration of the brain.

During the first few days he continued in this dazed, semistuporous condition induced partially by use of narcotics and slept most of the time. During the first few nights he had violent nightmares from which he awoke fearfully frightened and considerably dazed; more often

he could not remember the exact dreams, although he knew they were terribly harassing and involved some threat of annihilation. During the following days he was extremely excitable, irritable, and sensitive to persistent noises, though he was completely deaf in the left ear. On the sixth night he had a dream of a nude woman passing before him, but in the dream he remained completely unmoved by it. His interpretation of this dream was: "I suppose this is no time to be thinking of women. I have other interests to preserve." From the seventh to the twelfth nights he continued to have disturbing dreams. Their content included combats, police, race-riots, Jews fighting Chinamen, and so on, although in the dreams of this period he was not in any personal danger. He then began to dream of football games and baseball games.

During this last period his fantasies in the daytime were occupied entirely with his desire to get back to work and with the wish to recover rapidly, since he was extremely anxious to resume his normal routine activities. He often had dreams in which he was back at his work but was interrupted by continuous frustrations. Finally a dream which took place in a schoolroom was accompanied with some anxiety connected with examinations. This terminated by his saying: "Why worry about school? I don't go to school any more." This was the last dream of any kind he remembered. His convalescence was uneventful, and he recovered completely, save for a partial deafness in the left ear.

A psychologist friend sent him a toy Fifth Avenue bus as a gift, toward which he had a typical fear reaction at first; but after he left the hospital, he showed no fear of passing busses, though he was more careful than he had formerly been. Of the residual symptoms, irritability, fatigability, and irascibility persisted for some time and then disappeared. These traits were all foreign to his native character.

6. *Arteriosclerosis*. A man of forty-three had begun to suffer from arteriosclerosis at the comparatively early age of thirty-six. During the last year of his life his symptoms were so severe in their manifestations that he felt himself constantly threatened by death, and he often spoke about it to his friends. Though he rarely dreamed, for several months prior to his death he was constantly visited by hor-

rible nightmares, the content of which was fighting, bloody scenes, threats of annihilation; he would awaken with sweating anxiety. The dreams in this case corresponded in all respects to those of the traumatic neurosis, yet no obvious trauma had occurred. He never had any stroke, nor did he consciously have any fear of death, but he often had spoken of the threat to his ego which his disease involved and against which he was powerless. His dreams were evidence of the severe curtailment of resources occasioned by his illness.

7. *A brain tumor.* A student of twenty-three was sent to me for treatment of hysteria after a most trustworthy neurologist had found no evidence of organic disease. The presenting symptom was a certain type of convulsive seizure without loss of consciousness. The symptom appeared abruptly. One night without any relevant antecedents, the patient was awakened with terror out of a sound, dreamless sleep, and his body began to convulse all over. Able to speak, he called to the adjoining room for his brother, who tried to hold the patient in bed. The attack subsided after about twenty minutes. The patient was not confused but amazed by the experience and depressed. A fortnight later he had another such attack. The patient remarked that he also began to have vertigo, particularly on change of posture, and became extremely susceptible to noise. He had several nightmares in which he was being annihilated in some catastrophe and from which he awakened. He did not have any phobia of disease.

I took him for analysis and found a rather banal situation. True, he had a little neurosis, chiefly in the form of character traits, but I could establish no connection between his neurotic traits and these nocturnal phenomena. They seemed quite disconnected. Moreover, in the transference reactions I could see no reflection of this part of his neurosis. After these nightmares and epileptoid phenomena had continued for some time, I again asked the neurologist who referred him to me to examine him again and expressed my suspicion of an organic disease of the central nervous system. Examination was again negative. I proceeded with analysis for another month and sent him back for another examination. This time the neurologist told me he had found unmistakable signs of a temperosphenoidal brain tumor. He had an absent abdominal reflex and a Babinski on the right side.

The neurologist told me it was apparently a very slow growing affair. Naturally I turned the patient over to the neurologist for further care.

The purpose of demonstrating these various types of *trauma* is to indicate generally the direction in which we are to look for an explanation of the symptoms, that is, of the changes in *adaptation*. This direction is obviously not the same as that concerned in the hysterias, compulsion neurosis, or ordinary character disturbances. The similarity between the reactions produced by pain, fatigue, a mild accident without tissue damage, arteriosclerosis, brain tumor, indicates that the province of adaptation involved has to do with the body (that is, soma), with executive functions dealing with accommodation to the outer world, and with those internal somatic organizations supporting this executive apparatus.

Trauma, therefore, is an *external*² factor which initiates an abrupt change in previous adaptation. The particular domain involved is that dealing with the outer world, and any function connected with this aspect of adaptation can be involved. One way in which such an adaptation can be interfered with is by actual injury to the bodily part concerned (a limb or a sense organ) or to any part intermediary to its functioning (injury to nerve paths). *A traumatic neurosis is a type of adaptation in which no complete restitution takes place but in which the individual continues with a reduction of resources or a contraction of the ego.*

However, when such a trauma involves all the adaptive processes, the result is death; but when only a portion of the total body ego is involved, the necessity still persists to accommodate to the outer world with those portions still intact or to some extent modified.

To illustrate this point, let us examine the change in adaptation caused by the fracture of a limb. In this case, however, alteration of the process of adaptation is so self-evident as to merit hardly any explanation. The specific limb involved ceases to be effectual and in fact ceases to be a part of the executive apparatus. When any call is made upon this particular member, its activity must be deleted.

² The word *external* is not used as a spatial concept, for a brain tumor interfering with neuronc pathways, though locked within the skull, is also *external*.

However, since most of the organism is still intact and since external and internal stimuli continue to impinge on the individual, customary tensions must be relieved. This must be done with the rest of the organism taking up the slack created by default of one part. The new adaptation is like the old in quality, except that, for example, what the individual formerly did with the right hand, he now has to do with the left. Thus we can say in this instance the quality of the adaptation is not changed, only the executive technique. This is a point we must watch, namely, whether or not the *quality of the adaptation is changed*.

Some features of the actual injury to a limb we must note. The limb is functionally useless. The musculature about the injury is in spasm. Pain is present, and all posture and attitudes are designed to protect and immobilize the injured part. This immobilization is the first step in a complicated *healing process*, which facilitates certain cellular plastic processes with no relation to the conscious ego. The *cessation of function* and immobilization are, therefore, one of the first steps in the restitution.

In the case of a broken limb the change in the adaptive processes is very easy to follow. But in the case of a broken *adaptation*—to labor the analogy a bit—the restitutive processes are not so easy to follow because we are led to suspect qualitative changes in adaptation not present in the case of a broken limb. The principle of immobilization produces clinical indicators which we call symptoms. This, for example, is the case with muscular spasm in acute appendicitis or the diminution of respiratory excursions in pulmonary tuberculosis.

Whereas we are under no necessity to examine further these immobilization processes in internal medicine, for the concept "reflex spasm" takes adequate care of these phenomena, the case is different in the complicated trauma which involves highly complex integrative processes including psychosomatic interrelationships. But we are justified in singling out one series of unmistakable phenomena, namely, those which correspond to the concept of immobilization. This concept does not, however, do justice to the facts. A limb may become immobilized, but a sense organ cannot. We must, instead, therefore, use the concept of *inhibition*, which means that the function in question ceases.

Exactly how an inhibition operates is not well understood now, but we can assume that each organ will have its characteristic manifestations when its functions become inhibited. The relation of the organ to the sensorium and its accessibility to voluntary control will surely affect the manifestations of inhibition. The structure of the organ will determine its manifestations. But most important of all, the function may become blocked at any place along the line of its functional development. This is a complicated process, consideration of which will be deferred until a later chapter.

This concept of inhibition seems, however, to account for only a small number of the actual symptoms recorded. It can explain only the paralyses, the loss of consciousness, the sensory disorders, the fatigue, the disturbances in motility. The other symptoms recorded seem in no way due directly to inhibitions. However, we can expect them to be at least indirectly related to such inhibitions.

In conclusion we may, therefore, say that a *trauma* is an external influence necessitating an abrupt change in adaptation which the organism fails to meet, either being destroyed entirely by the external agency or in part, and that this destruction may involve not tissues but adaptation types. The predominant alteration of adaptation found in the stabilized forms of the traumatic neurosis are inhibitory processes which can destroy the utility value of an organ or its functions. The practical result of a trauma is, therefore, its interference with a completed function as an executive weapon.

What we study, then, in the traumatic neurosis are the new adaptations, which make up the bulk of the symptomatology. No individual function can undergo interference without altering the adaptation of the entire organism.

THE ALTERATION OF ADAPTATION

The clinical types described in the previous chapter show that the alteration of adaptation, which we now call the neurosis in its stabilized form, may place the emphasis in different directions. According to the predominant symptom these traumatic neuroses can be thus classified:

1. The simple restitution in the form of the repetitive tic or organ-

ized ceremonial. This is a truly remarkable qualitative change in adaptation. The subject acts as if the original traumatic situation were still in existence and engages in protective devices which failed on the original occasion. This means in effect that his conception of the outer world and his conception of himself and his resources as related to it have been permanently altered. The symptom is periodic, but the alteration in adaptation is constant, though its character may not be conscious. One could describe this as a "fixation on the traumatic event;" but this formulation does not tell us what has actually happened, though it has some descriptive value. The most highly organized form of the traumatic neurosis, the adaptive processes of this type retain an advanced degree of purposiveness and organization. The remaining types do not show any such traits.

2. The sensory-motor phenomena can exist in a highly organized or disorganized form. Some types of sensory disturbances are accurate hallucinatory reproductions of sensations originally experienced in the traumatic event. In this instance the symptom contains the idea, "I am still living in the traumatic situation," as we found to be the case with the type described above.

Most other forms of sensory-motor disturbance are pure contractile phenomena—obliterations of functional portions of the ego. Occasionally there are cases in which all sense organs ceased to function. In the paralytic phenomena no principle of selection could be found, whether monoplegia, paraplegia, or hemiplegia.

Other types of motor disturbances involved neither limbs nor functional units but activities, in the performance of which special difficulties were encountered such as tremors, all varieties of gait disturbances, and speech disorders. Cases in which paralytic phenomena prevailed noticeably lacked irritability, aggressiveness, or typical dream life.

3. The cases in which the predominant symptoms were sympathetic and parasympathetic phenomena are at times the original stabilized form of the neurosis and at other times the tail end of a convalescence from severer forms characterized by syncopal phenomena. The cases in which autonomic disorders predominate have constant irritability, sweating, tremors, tachycardia, and smooth muscle crises in every

possible location. Their dream life is stereotyped and of the typical catastrophic variety. Their sex life is impaired; impotence or diminished sexual interest, a constant feature. They are subject to frequent episodes of confusion and intense vertigo. A diminished capacity for sustained effort and easy fatigability are present; efficiency is markedly impaired through general inhibitions to activity of any kind. The autonomic disturbances often appear after a long period of syncopal phenomena. I have observed several cases of Graves' disease which arose after syncopal attacks ceased, but I have never observed both together.

4. The group of cases characterized by syncopal phenomena shows every possible variation from vertiginous attacks, confusions, and fugues to loss of consciousness with and without convulsive phenomena. I have seen nothing that resembles petit mal in these traumatic cases. The attacks are often provoked by external stimuli which resemble the occasion of the original loss of consciousness. For example, a patient who had been gassed would be thrown into an attack upon perceiving any volatile oils, as in perfumes or gasoline, and no other stimuli would produce an attack. Another patient had his seizures only when his feet became wet. These cases behave as if their attacks were finely conditioned reflexes. In other instances the "aura" of the attacks is the repetition of the last sensory impression before they originally lose consciousness—the sound of a barrage, the flashing of an exploding shell, and so forth.

A very interesting point of orientation in these epileptiform cases is the presence of anxiety. Generally these patients do not have any great facility in projecting their anxiety; the greater the anxiety, the fewer the epileptiform episodes. The symptom that stands in closest relation to anxiety in these cases is *irritability*. Phobia formation is completely unknown. Occasionally we encounter, not a projected phobia, but a fear of the epileptiform attack itself, as we often do in essential epilepsies.

From the standpoint of alteration of adaptation we can survey these clinical types A) from the point of view of their organization; B) from the point of view of the constant and variable features; and C) from the point of view of the fabric of new adaptation, that is, are the

newer adaptation forms regressions in the sense that we have used this concept in the obsessional neurosis and hysteria?

A. THE ORGANIZATION OF THE NEUROSIS

From the point of view of organization the type characterized by compulsive rituals is one in which the adaptation of the individual shows an organized effort at restitution by continuing the protective devices used on the original occasion of the trauma. However, that is not all. This evidence points very strongly to the fact that the individual is really in a continuous state of heightened vigilance and that his conception of the outer world and himself have undergone considerable change.

A second type of organization is to be found in the sensory-motor disorders. In those cases characterized by hallucinatory reproductions of sensations experienced on the original occasion, we again find the constant feature that the conception of the outer world and command of his own operating resources have changed permanently. In the case of the paralytic forms the new adaptation seems to be much on the basis of those principles illustrated by a fractured limb. The problem of adaptation is solved by casting out certain portions of the ego permanently and rejecting them for use in the newly reorganized ego. Therefore, although the individual's conception of himself has been profoundly altered, the change is apparently accepted completely by the individual, and he continues to live on the same level of adaptation as an individual with his limb amputated.

A third type of organization is illustrated by those with periodic syncopal crises. In these instances the problem seems to be solved by retaining all functions at a diminished operative level with periodic crises of complete contraction of the ego.

From the point of view of these three types of organization we can now examine the symptomatology with the idea of finding out whether or not all these symptoms have a serial relationship. This brings us immediately to a question in connection with symptomatology: What is a central and what is a secondary symptom? If, for example, we consider a symptom like insomnia, depression, or amnesia, we can conclude that these are all reactions of the personality as a

whole to another situation which we must attempt to identify. Depression may be a reaction to diminished resources; insomnia, one of the many manifestations of continued state of vigilance predicated by a constant anxiety due to a new conception of the outer world or of one's own resources. The amnesia is surely not a direct evidence of damage but obviously a defensive process of the personality as a whole.

Moreover, the real damage does not possibly always occur in the form of a symptom, like a paralyzed limb, but by inference we can understand the damage by examining the restitutive processes, particularly those common to all the traumatic neuroses. However, one exception to this is the paralyzes. Highly significant is the absence in this type of all the evidences of tension and discomfort which characterize all the other types of traumatic neuroses. This may be due to the fact that the damage to the adaptation is complete but localized in this case only. We are therefore justified in assuming that the real damage in the traumatic neurosis is essentially an inhibitory process, that this is the primary symptom, all the others being secondary.

This central damage may, however, be only partial in some instances. Let us consider the contrast between mutism and stammering; the differences between complete paralysis, fatigability, and weakness; vertigo and tremors; a localized permanent paralysis and periodical losses and consciousness. If we regard the differences between these series purely quantitatively, then we are in a position to group a large number of symptoms as secondary to this primary cause. The whole irritability syndrome and the whole series of autonomic (sympathetic and parasympathetic) symptoms group themselves as secondary to these partial inhibitions. However, these partial inhibitions are always notably accompanied by symptoms of heightened vigilance and timidity, such as the insomnia and the catastrophic dreams.

Our working scheme, therefore, is to make the inhibitory phenomena nuclear and the others secondary to this primary change.

Thus far we have introduced one essential feature of the psychopathology, namely, *inhibition of function*, and have predicated that the remaining symptoms are manifestations of adaptive attempts on

this new basis. In addition to this we have introduced the idea that inhibitions vary quantitatively, complete (paralyses) or partial. Thirdly, in these partial *inhibitions* the resulting adaptations will differ qualitatively.

B. CONSTANT FEATURES OF TRAUMATIC NEUROSIS

We now proceed to examine those features common to all the traumatic neurosis characterized by partial inhibitions, which include all except those with motor paralyses. Such features are:

1. Fixation on the trauma—altered conception of self and of outer world.
2. Typical dream life.
3. Contraction of general level of functioning.
4. Irritability.
5. Proclivity to explosive aggressive reactions.

The one variable is the extent to which anxiety and apprehension of situations in the outer world are consciously appreciated. Clinically the observation is borne out that the more the patients are subject to conscious anxiety, the less likely they are to have syncopal attacks. This is an extremely complicated phenomenon, but the explanation suggests itself that the existence of anxiety is an indicator of the extent to which the individual has resources at his disposal for escape from and combat against the anxiety-provoking situation. Furthermore it suggests that those cases in which the syncopal phenomena predominate are also those in which a repression-like defensive process is operating—the function of such a defensive process being to forestall or side-step the constant discomfort of the tension state created by incessant anxiety. These patients are, therefore, less protected and hence more subject to complete ego collapse on the occasion of certain crises. On the other hand, one may raise the question in this point whether or not anxiety is of much value in warning against a danger situation inescapable in fact—inescapable because the only alternative is practically a complete cessation of life itself. The reason for this is that the disturbed, inhibited, or blocked functions cannot be substituted. This feature was also brought to our attention

by the fact that displacement mechanisms so prominent in phobia formation of ordinary civilian hysterics are practically absent in the traumatic neurosis. One notes, for example, that the defensive rituals described in the case on page 16 are not symbolic in character but actual reproductions. Furthermore, those instances showing some phobia formations are not characterized by elaborate and remote symbolizations but by actual resemblances to the original situations which provoked the neurosis. In other words, we do not find anxiety expressed in the form we find it in the ordinary phobias, but we discover in its place another feature which points directly to the locus of these partial inhibitions. This feature, irritability, consists of a constant tension state, a readiness for defensive attitudes on the occasion of any sudden stimulus. We see, therefore, that the absence of both anxiety and elaborate displacements serves to narrow down the probable locus of the inhibitory processes. Moreover, a feature of the traumatic neurosis is the nonaccumulation of new features with time, as in the ordinary neuroses. The psychological fabric of the neurosis remains very thin. This is also confirmed by the stereotypy of their dream life.

If we regard the essential pathology as an inhibition and if we also must assume that the individual continues to adapt himself to the outer world with his diminished resources, then we can regard the other features of the neurosis as discharge phenomena. At least this is one way of looking at the disturbances of the autonomic system and the syncopal phenomena. Before we examine these "discharge" phenomena we can examine those features common to all these neuroses, namely, "fixation on the trauma," which merely means that the conception of the outer world and the individual's resources have undergone a change; the typical dream life; the sensory irritability; the proclivity to aggressiveness; and the constant reluctance to activity.

Fixation on the traumatic event. This concept of "fixation" was introduced by Freud and after considerable maneuvering came to mean an *arrest of development*. This concept "fixation" is useful in the traumatic neuroses only to describe the fact that the effects of the trauma have made a permanent alteration in adaptation but not necessarily an arrest in development. It is barely possible we will eventu-

ally be able to detect such an arrest early in life, but at present we have no means for locating this type of arrest. What is more obvious is that the adaptation of the individual has undergone a change in quality and organization.

It is notable in this connection that either the patient has a complete amnesia for the trauma, the amnesias extending over the period after the event and rarely for the pretraumatic period, although such amnesias as the latter have been noted, or else the trauma is remembered with many of the details missing, but the appropriate affect is either completely absent, as in some epileptiform cases, or not associated with the trauma at all. There is reluctance to think of the trauma or of anything which resembles it. However, the effects of the trauma are constantly active in the patient's dream life. This amnesia is a crucial symptom. It indicates not merely that certain events of the past were painful but that the effects of the trauma persist in the form of an altered ego organization. The proof of this hypothesis is suggested by the fact that when the pretraumatic ego organization is restored, the amnesia lifts, as is the case in the ordinary neuroses.

The dream life. As we have said above, the dream life of the traumatic neurotic is one of the most characteristic and, at the same time, one of the most enigmatic phenomena we encounter in the disease. Unlike the dreams in transference neuroses the traumatic neurotic is given to a strange stereotypy in his dream life. A special difficulty confronts the investigator in attempting to study the dream life of the traumatic neurotic. These difficulties are inherent in the nature of the neurosis. The attempt to get associations to dreams is usually futile. This is partly due to the general braking of all intellectual associative functions. Furthermore the dream, as a rule, only begins to say something but never completes it. Instead of the condensation and the compactness of action in the dreams of the psychoneurotic, we have here a process of dilution and retardation, like the picture of a normal piece of action slowed down by the motion-picture camera, the film's being cut off before the action is completed. The images are redundant and perseverative.³ Indeed amazing is to hear a patient

³ This type of slow and perverse miscarriage of gratification is most prominent in the comic, more particularly in what is known as slapstick comedy. The release in

whose illness is nine years old state that night after night, with most monotonous regularity, he has dreams which take him back to the war scenes or which consist of feeble transformations of those battle scenes. We reproduce here a series of dreams narrated by a patient eight years after the original trauma.

1. I went somewhere, and we were discussing some things. After this I went home. On my way home I was coming down the elevated stairs. I dropped dead and rolled down the stairs. I woke with fear and found myself almost out of bed.

2. I was talking to a few fellows about different things. I got into an argument with one. I picked up some things and hit him with them and killed him. I ran away and hid myself and woke up frightened.

3. I was at a party and a fight started. Someone began shooting and shot me dead right through the head. I woke up frightened.

4. I saw my folks. They told me that my grandmother had just died and had come to see them, and they asked me why I do not come to see them. (Father and mother have been dead for three years; grandmother is still living but is paralyzed.)

5. Someone threw a match into the cuff of my pants, and they started to burn. I woke up scared.

6. I was on the Woolworth Tower and looked down, and as I did so, I slipped and fell to the ground. I made a hole in the sidewalk and was smashed to bits.

7. I was in a garden somewhere, and there were large roses, larger than myself. I climbed up a ladder to smell them, when a large bee stung me on the back of the ear, and I woke up with a sharp pain which lasted about half an hour.

8. I was a keeper of a lot of birds in a great big place.

9. I was on the subway station. Someone pushed me off, and I was thrown on the tracks. A train came along and ground me up.

10. I was in swimming and I was drowned.

these comedies is, however, laughter, because the victim is never hurt; in other words, a successful overcoming of the trauma. Also to be remarked is that generally all mishaps which terminate in disturbing normal upright posture—a man's slipping on a banana peel or even lesser accidents like a strong wind's blowing a man's hat off—always carry a comic and ridiculous tone, thus provocative of laughter. The relationship between laughter and fright reactions is very close in the infant. The comedian is interminably shot in the pants, but he keeps on running; innumerable custard pies strike and smear his face, but he keeps up the harmless combat. The explosive tension in slapstick laughter is caused by the fantasy of triumphant invulnerability together with a deep conviction of the falsity of the situation.

11. I was taken sick on the street with a spell. When I woke up you were there to give me some medicine, and you told me to take it.

12. Somebody was sticking me with hot irons, and I tried to run away from him and could not.

13. I was riding in an elevator in a big building. It went up so fast, it went right through the roof. I was on a large boat with a lot of people, and all were on one side of the boat. It capsized and we were all drowned.

14. I went up to see my aunt who has been dead for six years. It took me two days to get there, and when I got there she was sick. She told me to get out. (Patient's association in this dream was that he was very fond of this aunt and that he used to go to visit her often.)

15. I was fighting with a lot of dead people, sticking knives at them, shooting them with a gun, but they didn't do anything. They got scared.

16. I was fighting fish at the bottom of the sea. They got frightened.

We note that the most common content of the dream is the threat of annihilation. The next type of dream in frequency is the aggression dream, in which the patient himself is the aggressor but is usually defeated.

These dreams are capable of several typical transformations. The first of these may be called "the Sisyphus dream" or the frustration dream. In this type the individual is usually confronted with a persistent and unshakable frustration. Whatever activity he engages upon is greeted with a certain stereotyped futility. Thus, the same patient whose dreams were recorded above dreams also the following:

"I was in the room, and everything I touched or grabbed was turned into sand. I put my hands in my pockets, and there was sand in them. I took off my coat, and there was sand in it. Everyplace I looked I saw sand; every place I walked, I was in sand. I tried to get away, but the harder I tried, the deeper I would sink into it."

Some time later the patient brought another dream of the same variety, but instead of sand everything turned into water, and he awoke as he was almost drowned. Though the patient could not help me with associations, the symbol of sand and water is typical for situations in which fatigue sets in very easily.

From this type of dream to the next one is an obvious transition. This second type of transformation may be called "the occupational dream," which has hitherto been described by MacCurdy and others

in connection with neurasthenia. In this type of dream the patient is engaged in an occupation, usually one in which he was engaged the day previous; but instead of the work's being consummated, the patient encounters numerous obstacles and often awakens with disaster threatening him. Thus a patient dreams:

I am in the yard while playing the water hose upon the flagstones. Water stops running. After a while it begins again. Then the neighbor from whom I borrowed the hose comes out and reproaches me, finally swears at me, and then strikes me. Then all the neighbors come running out, and they chase me all over. Then I awaken in a sweat, feeling as though I had the life pounded out of me.

The following dreams represent an interesting transformation of the annihilation of the ego. The conflict is shifted from the threat of annihilation of his body-ego to his means of livelihood. The patient, owner of a chicken farm in Long Island, brought the following series, in addition to the usual annihilation dream.

"I dreamed that I was on my chicken farm and that I saw great big rats eating up all my chickens." "I dreamed I was in a rowboat and was riding in my boat over my chicken farm," to which the patient spontaneously made the association: "You know, chickens can't swim." "I was on my chicken farm, but I noticed that the whole farm was covered with cement," to which the patient added, "Chickens need earth to feed upon; they can't live on a cement floor."

In other words, where no threat of immediate annihilation occurs per se, the threat is implied in the destruction of the patient's means of livelihood. The occupational dream is really a phenomenon of the same sort, in which the means whereby the patient earns his livelihood is being constantly frustrated. This is, of course, only manifest content. They are dreams of frustrated dependency longings.

Although I could elicit no associations to these dreams other than the few recorded, I think we are justified in pursuing them a bit further. The dreams all say, "My means of livelihood is being destroyed." "I am separated from my mother"—hence birth or impoverishment dreams. But the affect of helplessness, fright, does not take an explosive form; it is attenuated and drawn out. Still another interpretation is: "I cannot 'eat' the world," in other words, achieve

an oral mastery over it. Most important to note in these dreams is the oral symbolism and the absence of the anxiety-fright reaction. I do not believe this a coincidence. This patient was much further on in his convalescence than most traumatic neuroses I saw. He was moderately well adapted, though this success was achieved at the cost of a partial withdrawal from those stimuli in the outer world which most annoyed him—noise, contact with people, and so on. Hence he opened a chicken farm in a deserted section of Long Island. From this *niveau* he is apparently able to begin to be interested in the world again in an orderly manner, beginning with the oral zone, the earliest type of mastery. These dreams are a record of this stage of his recovery. One can begin to reinterpret the world by means of one single interest, and such a stage represents a decisive step in the reintegration of the ego. It indicates, moreover, the direction in which this reintegration takes place and what occurred in the breaking up of the ego.

These birth dreams, separation from mother (*Weltuntergang*, annihilation, and frustration), indicate in a general way what took place in the traumatic moment. The subject's mastery of the outer world ceases momentarily. In this moment he has been torn forcibly from a hitherto friendly world. The re-establishment of the friendly relations to the outer world may follow the same patterns as they did immediately after birth.

The third form into which the annihilation dream may be transformed represents a real transformation of the affect. These are the guilt dreams. In these dreams the patient is engaged in some hostile pursuit against some loved object, and he awakens from it with the profound feeling of guilt.

The annihilation dreams are for the greater part responsible for the insomnia of these traumatic cases. The patient awakens with a feeling of relief and goes back to sleep again, this performance often being repeated four or five times a night. Not infrequently he develops a defense against his dreams in that he is able to say to himself in the dream, "This is not true," and lapses into a dreamless sleep, or he awakens and finds the familiar evidence that it is only a dream. I found this to be the case in several instances. The patients at first

told me that they had no dreams at all, but on careful investigation it proved that they had had nightmares every night, after which they went back to sleep in a comfortable state of mind. In the morning they had forgotten all about the nocturnal experience.

Are all these dream types related? It would seem so. I must recall the dreams of my friend who was convalescing from a fractured skull (see p. 76). His earliest dreams were annihilation dreams; then followed combats in which he himself was out of danger—feuds, race riots, and so forth, then more refined combats in the form of sports, and finally the occupational dream which ended in frustration, this last followed by one in which he said to himself: "My apprenticeship is over." This man had thus during his convalescence all the various types of dreams found in traumatic neuroses except the guilt dream. There is reason to believe that this content varied with the stage of convalescence, with the patient's knowledge of this, and with the re-establishment of his confidence not only in survival but in his capacity for work. Yet, as we saw, the trauma did not give rise to any of the permanent inhibitory phenomena found in the traumatic neurosis; he was normally adapted to the external world. Thus he did not have to fixate upon any inhibitions. Secondly, the convalescence was a complete form of abreaction. Thirdly, the constitutional factor was missing.

These dreams furnish us with a most vital clue as to the locus of the disturbance in the traumatic neurosis, and point towards the belief that the idea of physical survival in the traumatic neurosis is also connotable with the idea of work. All are forms of activity, aggressive activity, means of mastering an enemy, or the forces of an environment, and so, WORK. We now begin to see why the traumatic neurotic has inhibitions to work; the ego-organizational basis of work has been undermined, and he now seeks militant methods of parasitic existence.

We now come to the guilt dream, a type of dream I have encountered only in those with epileptic symptom complex. Stekel (87) and Schilder (84) have also noted this dream in true epileptics. It is not difficult to account for if we remember an observation of Freud's in "*Das Ich und das Es*." (37) He says that the more an individual

is obliged to repress his sadism, the greater is his proclivity for guilt feelings. The guilt dreams show us, therefore, an immediate difference between the sadism directed to love objects and the sadism directed to the outer world. In the one case we have a threat of annihilation, in the other case a feeling of guilt.

From the dream life of these patients we can therefore draw certain conclusions about the nature of the conflict. What Freud says about these dreams in "*Jenseits des Lustprinzips*" is undoubtedly true: that the individual tries to abreact piecemeal the anxiety generated by the traumatic event. But in addition, several other points are worth noting.

If we consider the dreams of the patient recorded on page 89 we find that the dreams are concerned with certain actions and objects. With regard to the actions, the dreams are all incomplete between the initiated action and the objective—going downstairs, riding in an elevator, and so forth. A constant fear is injected. Instead of the completed action, a threat of annihilation intervenes. This is the miscarriage either of his own ability or of the constancy of the physical laws of nature. The action is always initiated and the objective in sight, but it always fails. Why the action is undertaken need not concern us at the moment. This frustration of the objective of a given piece of action is especially prominent in the frustration of Sisyphus dreams. One might say this represents an inhibition to complete the action. True enough, but why the inhibition?

Secondly, the dreams of this patient concern themselves also with the death or illness of women (grandmother and aunt) who are love objects, very likely mother substitutes. Note the dreams of the man who had a chicken farm. They seem to be a combination of miscarried objective and death of mother (means of livelihood). In the guilt dreams we have one additional elaboration; an aggression to the object from whom one expects love and help, plus a fear of retaliation by the object.

Thirdly, the only action that can be carried through is a wild and ungoverned aggression; he annihilates or is annihilated.

These three types of dreams say essentially the same thing in different ways; they all reproduce a helpless situation with its tremendous

release of disorganized aggression. They all say, "I am as at birth, I perceive the world but can do nothing with it, hence it threatens me."

We can now go a bit further in the interpretation of the neurosis. Some portion of the integrated ego is either destroyed or inhibited, a portion which normally enables the individual to carry out certain actions automatically on the basis of innumerable successes in the past. This portion of the ego is injured in the traumatic experience, and what results is an inhibition. This portion of the ego has, moreover, a protective influence on the ego; these protective maneuvers we call mastery or adaptation. Being deserted by these protective devices, their psychic representatives, or those portions of the ego that have taken over these functions originally exercised by such devices, the subject feels deserted and obliged to face a world that must annihilate him because he no longer has any defense against it. At least he has lost command of the more highly integrated forms of defense against it, and what remains is nothing but two primitive modes—violent and disorganized aggression, or abject helplessness.

The irritability of the traumatic neuroses. From the point of view of distribution, irritability is absent in no case of traumatic neuroses. It concerns chiefly auditory stimuli, but in some instances there may be sensitivity to temperature, pain, sudden tactile stimuli. These patients cannot stand being slapped on the back abruptly; they cannot tolerate a misstep or a stumble. From the physiological point of view there exists a lowering of the threshold of stimulation; and, from the psychological point of view, a state of readiness for fright reactions. This is intimately connected with the general hypertonicity of these cases. Auditory hypersensitiveness is most common, being the most widely distributed sudden stimulus, ontogenetically the oldest sense organ which establishes contact with its environment, and the most intimately connected with fright.

Some question arises whether or not one can regard this auditory hypersensitivity as a form of preparedness for anxiety or fright. These patients, in response to sudden auditory stimuli, do not go into anxious states, but into fright reactions. The responses are chaotic, at times paroxysmal, and lack organization; after the reaction is over there

remains no residue of anxiety but only a heightened sensitivity to the stimulus. It is not a displaceable anxiety but a reflex and is more closely related to the syncopal reaction than to the displacement phobia. Often the loud noise is the signal for an explosive violence or a lapse of consciousness or, in milder cases, a state of general tremor and fright. This apprehensiveness evidently cannot be converted into hypochondriacal or phobic structure.

Possibly the inability to use this apprehensiveness in the form of phobia depends on the content of the reaction and on its object. Anxiety is a state of organized preparedness in which considerable time lapses between the anxious state and the feared stimulus, but fright is a disorganized and immediate response to an overwhelming stimulus or one that appears to be such. As a rule, no anticipatory fear of either exists in these fright reactions to noise.

Sensitivity to other stimuli—light, smell, special stimuli like rain, snow, and so on—are determined by the circumstances of the initial trauma. Photophobia is rare as a general symptom. The sensitivity to special stimuli has the character of a conditioned reflex; it is not a learned, but an automatic reflex. The irritability also extends itself as a diminished capacity to tolerate any stimulus, whether it be effort of work or entertainment. An inability to fix the attention on any given occupation, a distractibility, exists although the patients are actually occupied with nothing.

From what has been said about irritability and the dream life, the disturbance of sleep is easily one of the most constant features of the traumatic neuroses. The increased susceptibility to external stimuli prevents them from falling asleep; and when sleep is accomplished, the dream content awakens them. A common form of disturbance is the awakening during the hypnagogic state. The inability to cross this threshold may occur six to seven times a night.

The tendency to aggression and violence. This is one of the most common complaints of traumatic neurosis. Most patients have complete insight into this characteristic, are troubled by it, and want relief from it. It is, of course, intimately related to the irritability and hyper-tonicity of the entire muscular system. The aggression may show itself in the tendency to tempers. Easily aroused to anger, these patients are very prone to motor expression. They either break or tear objects in

these fits of temper or strike the people who happen to be around them. This symptom is subject to wide variations. If the outburst is accompanied by loss of consciousness, the patient is usually dangerous; assault in this state is not uncommon. Often these patients injure themselves unintentionally.

This feature of aggressiveness and violence is present in every traumatic neurosis, irrespective of other symptoms; it varies, naturally, with the severity of the neurosis, at times being nothing but an occasional flare of temper. Most pronounced in the epileptiform cases, it is also a conspicuous feature of true epilepsies, as we know. One does not, however, find it to any extent in the physioneuroses of peacetime, although one does find the irritability, particularly to noise.

Concerning the source of this aggression, we may find some clue in the normal phenomenon of fatigue. A fatigued person shows, in many respects, the same features of irritability and aggressiveness. A fatigued individual has lost the capacity to analyze and to react adequately to external stimuli. His reactions are then more primitive, but the normal state can be restored with physiological rest. In these traumatic cases the capacity for rest is disturbed, and in many ways the reaction seems to be one of chronic irrecoverable fatigue.

The aggressiveness of the traumatic neurotic is not deliberate or premeditated. He never carries a trend. His aggression is always impulsive; nor is it capable of being long sustained. Entirely episodic, it often alternates with moods of extreme tenderness. One never finds the aggressiveness and the impulsive violence without reactions of tenderness. Thus, one soldier with a severe neurosis was stopped one night by a street accident. He rushed to the injured person and scolded all the bystanders for their negligence. At the same time he was susceptible to physical pain to an inordinate degree.

The sadomasochistic complex is related to the irritability, the incapacity to analyze stimuli in the environment. Not found in the physioneurosis of peacetime, this complex is present in the true epilepsies in which, indeed, it is less controllable and subjected to a large variety of checks and reaction formations.

The inhibitory phenomena. We would expect in the presence of these violent outbursts of aggression to find inhibitions directed toward higher and more organized forms of aggression. This is the

case. We find the outbursts of tenderness standing in relation to this as a reaction formation. The inhibitions take the form of inaptitude and lack of interest in work, fatigability, vertigo. Perhaps the tremors and speech defects may be considered inhibitory phenomena. But these latter two are more difficult to understand as inhibitions, especially the tremors which are so much bound up with irritability and hypertonicity. Sexual impotence is not infrequent in these cases, and when it occurs in conjunction with a picture of traumatic neurosis, I prefer to regard it as part of this syndrome rather than due to purely psychosexual conflicts. The existence of such in the presence of psychosexual conflicts is easy to identify. Thus, one soldier who had such symptoms of traumatic neurosis had an easily recognizable paranoid condition with a repressed homosexual trend. He was also impotent. This regression to homosexuality did not appear to me to be caused by his traumatic neurosis. It is difficult to conceive how this could take place. Much more likely, during service his exclusive contact with men in the army increased his efforts to repress this trend. To conceive of an impotence that goes with the general repression of sadism in the traumatic neurosis is not impossible.

We have seen from the irritability and aggressiveness and the dream life that the disturbance lies in the relation to the outer world and in those portions of the ego whose contacts with the outer world are immediate and whose function is to master the environment. The patient is, accordingly, inhibited toward the refined means of aggression expressed in work, the conversion of material into things, or variations of this pattern. The vertigo and the tremors make it impossible for him to continue to work; things fall out of his hands, he is awkward and slow, it takes him a long time to accomplish a simple task; the result is diminished interest in work and less gratification in its performance. With this inhibition to work goes a decided lack of enterprise and ambition. The patient is constantly obsessed with fantasies which make him put up with the barest kind of existence, makeshifts, and dependencies, provided that it relieves him from the obligation of toil. In short, all forms of work are apparently stripped of their gratifications.

From this approach the patient's dependency on compensation is

not difficult to understand. This feature does not, in any instance, create the disease but appears rather as a logical and necessary outcome of his inhibitions.

I have not been able to work out the characteristics of the tremors. It would be extremely difficult to evaluate them psychologically. As regards the vertigo, accurate descriptions help us to differentiate several varieties. One form of vertigo is chiefly a locomotor disorientation; the environment rotates, moves, or makes perpendicular excursions. Referred chiefly to the eyes, it is described in visual pictures. Another form is described chiefly in kinesthetic terms and refers almost entirely to the localization of the body-ego. These patients describe their vertigo as an awareness merely of the head. The rest of the body seems to be floating in the air, "walking on clouds," "cannot find my legs," and so on—a condition decidedly related to the paresthesias and described by these patients as a part of their body's "going dead on them." Whereas these vertigos frequently arise in certain situations, high places, very often the attack has no relation to position or occupation. Most frequently the attack is provoked by change in position, especially upon bending down.

In connection with the inhibitions of these patients, a word must be said about the contraction of the intellectual field, very like the contraction of the visual fields. The patients have a great reluctance to think directly and consistently about anything, are distractable and apathetic; but the interest in compensation is vividly maintained. This is the only thing I have ever seen a traumatic neurotic really become emotional about.

The sex life of the traumatic neurotic is not very different from the rest of his behavior. *Sexual difficulties* never make the chief complaint; in fact, they are never a complaint at all. One usually solicits some information about it by questioning. The commonest symptom is impotence in the form of aberrations of erectility, premature ejaculation, but most often in the form of a lack of interest in the act or in woman altogether. In view of the general character of the traumatic neurosis, this does not strike me as inconsistent. I get the general impression from all these cases that their sexual development has remained in a primitive stage. I regret that circumstances did not

favor a more systematic pursuit of this important aspect of the problem. Many factors resident both in the patient and the circumstances under which I treated them rendered this research impossible. In this respect the work has to remain incomplete.

We must note in passing that the affective tone in traumatic neurosis is generally diminished, except for aggression and tenderness. But these latter excesses are clearly the result of narcissistic identification. The patient, incapable of joy, never laughs; incapable of sorrow, never cries; is never overcome with any emotion, except when his new sources of dependency are threatened, or when he identifies himself with someone who is being hurt or threatened.

C. REGRESSION OR DISORGANIZATION

Now we can approach the question of the character of the neurotic reaction: Is it in the nature of a regression or disorganization? The traumatic neurosis is characterized by the thinness of its psychological fabric and by the absence of those displacement phenomena which make up the bulk of the material in a transference neurosis. This absence makes us suspect that the material of this neurosis is different in character from the transference neurosis. Up to a certain point the two types of neuroses seem to be similar; judging from the amnesia that usually envelopes the traumatic event, the work of repression seems to be exactly like that in the transference type except that it does not seem to involve idea systems nearly as much as it does *action* systems. The repressed ideas are hidden from consciousness and kept there by a powerful force; the repressed affects, however, seem not to have the same leeway in the traumatic type; they cannot be as readily displaced or symbolized, and even in the dream life we find them invariably tied to the traumatic event. The repressed affects, however, are associated with constant inhibitions, and the blocked energies do find their way out again in a form not familiar in the transference neuroses. The outburst of aggression in these neuroses does not have any resemblance to the process in compulsion neurosis; in the latter, the aggression is organized and directed toward specific relations to individuals; in the traumatic neurosis, much more diffuse and disorganized. Another important difference lies in the

methods both neuroses employ in handling the anxiety. It seems much more difficult in the traumatic cases. In connection with the disposal of the anxiety, the work of repression shows a departure from the psychoneurosis. In fact, after a certain point the work of repression seems to cease altogether, and the ego itself disintegrates from that point on. We have already indicated that the conflict is about the outer world and concerns certain specific instruments of mastery.

Let us first examine a case which has much in common with the ordinary neuroses:

The patient was thirty-three years old, fifth child of a family of ten, three of whom were dead. His mother had died when the patient was nine years old. This latter event, according to the patient, did not affect him very much.

At the age of twelve the patient, who did not wish to live with his brother after his father broke up house, ran away from home and became a mess boy on board a sailing vessel. His schooling was interrupted at that time and was never resumed. He never learned a trade, although he had had a large variety of occupations prior to service. Between his twelfth year and the present time the patient had spent about three years with his father, worked for a while as a sailor, then as a stove mechanic, and finally as a truckman, which occupation he continued until he entered service.

Of his history prior to service nothing definite could be established but that he had epileptiform seizures following an attack of diphtheria, which continued for an indeterminate period.⁴ The character of his infantile convulsions could not be ascertained and was probably denied because he thought it would impair his status as a government claimant. His parental attachments were not unusually strong; his reaction to his mother's death was quite normal. He was emotionally a rather shallow individual; he was never in love with anyone, though he married after he returned from service a woman many years older than himself. Toward her he was very ambivalent. As a soldier he distinguished himself by extreme bravery in situations of danger.

When the patient was first seen, in March, 1925, his neurosis was seven years old. It might, perhaps, be best to tell the story as he told it himself in the course of treatment. When he entered the room he sat down rather stiffly; the expression of his face was hard, immobile, and Parkinsonian, most lines

⁴The patient could not have had the seizures very often in service without being discharged. This fact is important, however, since it shows that the patient had proclivities for reacting with loss of consciousness. In view of the fact that the patient was not a typical epileptic, this early history does not vitiate the merits of the case. For purposes of this essay, the clinical diagnosis is immaterial.

of expression being obliterated. He answered in monosyllables and seemed to have an attitude of defense. He volunteered no information and made no complaints. In looking over his previous records, I noted that the patient was suffering from spells of some kind. I proceeded, therefore, to make the usual inquiries about his war experiences and the traumas to which he had been subjected. At this point I began immediately to encounter a great deal of resistance and anger. He explained his anger on the basis of an unwillingness to talk about the war and especially about a certain event which had occurred in service. This particular event, he said, was the starting point of his neurosis. When his anger was abated to some extent and he was encouraged to talk about it, anxiety set in. We see, hence, that it did not take very much to uncover the anxiety underneath his superficial aggressiveness and his defensive attitude toward the environment. At this point the patient became very plaintive and pleaded for help, but insisted that concerning the traumatic event he remembered absolutely nothing. The patient was then asked to describe the fainting attacks or spells and every detail in connection with their onset which he could recall. He said everything grew dark, and he sometimes saw shadows in this clouded state. When asked to pursue the subject of shadows, he remembered that on the night he was blown up he was crawling on the ground on a scouting expedition, about seven o'clock, in pitch darkness, and that while thus engaged, searchlights began playing on the party and caused shadows on the ground. At this point the patient became very agitated and begged to be relieved from further pursuit of the subject at that time.

His following appointment was two days later. He came about two hours late and stated that for the past two days he had been in a constant state of panic, that he hardly knew where he was, that he could not sleep at night, that he was disturbed, that he had distressing dreams, and that he was afraid to move out of the house for fear he would get an attack and have to come up to the clinic in a taxicab.

This state of anxiety persisted throughout the greater part of the hour, although, when the patient first came, his anxiety was slightly covered by a series of defenses seemingly directed toward the external environment.

The task of recovering the traumatic event consumed a period of several months but was never completely accomplished. After violent upheavals and a great many distressing dreams, the patient would recall some little minor detail in connection with the frightful event. All of this was exacted from him in the face of persistent and violent resistance, in quite the same manner as the hysteric struggles to bring out the details or interpretation of some painful experience. The difficulties he had in recalling these details of the traumatic event would sometimes result in an attack of vomiting, as if he wished to vomit forth this foreign body buried in his mind. The spells came at varying intervals, sometimes twice a day, sometimes after a remission of four or five

days. The occasions on which he got the spells seemed to be such as resembled or symbolized some detail of the original traumatic event. For example, he would very often have a spell just as he reached the top of the staircase and when he would enter a dark room. By the "spells" the patient intended to describe a loss of consciousness not accompanied by convulsions—a syncope without relaxation of sphincters but with occasional biting of his tongue and grinding of his teeth. This latter fact was evidenced by his many teeth broken from chewing clothespins to vent the violent aggression during his attacks. The oral character of his aggression is self-evident.

The loss of consciousness was always complete although occasionally more like a *petit mal* and sometimes took the form of a fugue with an outburst of violence. Of this latter type of spell, the patient described a state in which he would seize any near-by object, his shirt collar or necktie or an article of furniture, and proceed to tear or break it. On such occasions he has been known to assault any person who came into his immediate vicinity or who dared to touch him. On these occasions also he would chew his clothes and masticate them into fragments. Formerly he was precipitated into these spells by any sudden or persistent noise. The only aura which the patient had was a gradual blindness and the seeing of shadows. The major spells lasted from fifteen minutes to two hours, and he always woke up with a feeling of confusion and disorientation followed up by a stuporous sleep.

The patient stated that he was a fearless soldier, never subject to anxiety states during the war. The traumatic event took him entirely by surprise, and at the first sitting he remembered nothing but that, confined in a straitjacket, he woke up in a field hospital a long time afterwards. From his story it would seem that for a few days or possibly as long as a fortnight, the patient had been in an acutely agitated hallucinatory state. He would recall nothing more at this stage of the treatment.

After the first few sittings the repetition mechanism was explained to him, and insofar as it was possible, he was directed to see that the spells were repetitions of the original traumatic event and that in his original reaction he also lost consciousness. Furthermore, he was told that all the auras he described were hallucinatory sensory reproductions of the experience immediately preceding the first loss of consciousness on the battlefield and that he was protecting himself with all his might against any repetition in the outer world of the original trauma and against any recollection of the event.

After the first few sittings then, the patient's reactions were extremely violent and distressing. This phenomenon has been observed by some other authors, who state, therefore, that such a practice of permitting them to recall the original trauma is wrong in these traumatic cases. With this view I cannot concur, for this recollection is a means to an end. This attitude of alarm, when the patient shows an aggravation of symptoms, speaks for a lack of

experience and an ignorance of the psychopathology of the disease. Any form of anxiety that the patient expresses is, from the point of view of therapy, a much more benign reaction than any of those which set in as a result of complete suppression of the anxiety. Whereas the patient may complain and may appear, for the time being, to be somewhat aggravated in his illness, the release of this nuclear anxiety is the kernel of the therapy. One must not be alarmed by it. The patient's immediate reaction was that he had seven spells within a period of a week after his first visit to me; that he spent two sleepless nights; and that, although he had been having anxiety dreams for the past seven years, they did not compare in terror with those he had had since his first visit to me.

He then said that ever since the traumatic event he had suffered from insomnia, from the typical anxiety dreams. The content of these dreams was that something horrible was happening to him or that he was in the rôle of the aggressor by killing some man and was punished as a result, or finally that some person very dear to him was dead. Immediately after the treatment was begun, the patient brought two dreams: "I dreamed that I was killing a man and then that I was being electrocuted. I really felt the electric shocks going right through me. I couldn't sleep for a long time. Then I had another dream in which I was murdering a man. The horror of these dreams was so great that I had to get up and walk the floor until seven o'clock in the morning. Then I tried to go to sleep again, but I was awakened this time by a dream that the enemy was after me. Then I found I couldn't sleep any more, and during the following four days I had dreams in which I tore my hair and my clothes."

The remarkable feature of all this was that, together with a dependency upon me for help, a vast amount of anxiety was released.

The dreams brought by the patient were that he was being tortured, killed, persecuted by people around him with weapons, or that he was being annihilated by the elements, that thunder and lightning were raging around him, or that he was falling from great heights. He also dreamed that people to whom he was much attached were being killed. This sometimes concerned his wife and sometimes his father. These latter dreams were extremely distressing, and whenever he had one of this variety, the patient came with a profound feeling of guilt and with the same kind of conflict found in the transference neurotics when they discover their hostile wishes and death fantasies about some person whom they presumably love. The type of dreams in which the patient was the aggressor was usually the more distressing. In fact, one could hardly perceive any difference in affect toward the dreams in which he was the aggressor and those in which he was being annihilated. As we shall later show, the dream of annihilation and the dream of aggression are complementary parts of the same nuclear complex.

A dream in which he was killing his wife obsessed him for days. After such a dream he would walk around the next day crying, but he did not know about what. When asked to associate with it, he said that his wife, the most valuable person in the world to him, had helped him through all his difficulties, and yet he had dreams of murdering her, of seeing her casket being carried out, and so on. The guilt which obsessed the patient often took the form of hypnagogic hallucinations, in which someone, usually in uniform, would point a finger at him and shout, "You killed me!" This type of experience would often repeat itself several times during the same night. These aggressive dreams almost always brought associations about his mother. She usually was encouraging him, advising him not to be afraid, and assuring him that she was in her resting place. In association with these sadistic dreams, the patient mentioned that prior to service he had frequent occasion to witness accidents. This he did with perfect equanimity; he had several times seen men killed in the railroad yards, he saw a lion escape in Central Park from the Zoo, he saw operations performed on animals; but he was never fearful.

Prior to the war he was never afraid of death; even now, when directly questioned, he said that he did not fear death, but that he rather wished for it as a release from his difficulties. He narrated, moreover, that before service he was a gentle and agreeable person but that now he was always looking for trouble, carried a chip on his shoulder, and was always ready to pick a quarrel. This notwithstanding, the patient was very easily frightened by anything which suggested fighting. If he chanced to be at a motion picture with a war scene or a battle or a gun in action, he would go into paroxysms. Whenever a loud noise occurred on the street, he either would be thrown into a panic, a paroxysm, or would start running wildly for blocks at a stretch, finally ending up some alley. On one such occasion he ran for about ten blocks from the original scene, then up three or four flights into a hallway, and landed, exhausted, in a factory. This is very like the running amok observed among the Malays. When asked why he ran, he said that he did not know, that he could not stop running; it was, indeed, very much like the reaction of a frightened horse.

The patient had several displacement symptoms. He feared going uphill or downhill. We shall see presently that this going up- and downhill was associated with the original trauma. He feared falling; he feared riding in a subway train; he feared a collision or the train's jumping the track. He was mortally afraid of street traffic. When he came home and found nobody there, he feared that there had been burglars in the house or that the house was on fire. He feared diving into water or climbing a pole, both of which he had done with bravado as a child. An important displacement was the fear that somebody was following him on the street. This did not have the character

or the persistence of a paranoid delusion but seemed a part of his general fearful adaptation to the environment, and he knew that these ideas of being followed were imaginative. He did not take any of the usual paranoid defenses against pursuit.

Concerning his minor spells, the patient often described phenomena of transient blindness. These he got most often when stepping out of a car or a vehicle or out of a house, or when he would see someone being hurt. On several such occasions he had to be taken home by some passer-by. Another form his behavior took was fugues of violence, in which he tore bedclothes to strips, chewed up clothespins, tore his collars, and struck people. Compulsive and senseless laughter and nonsensical talk, of which he was entirely unaware, were also the content of these spells.

As regards the original trauma, the patient did not, during the period of observation, succeed in completely recalling and reconstructing the event. With a great deal of effort, however, he was able to put together some of the fragments sufficiently to indicate some of the conditions under which he lapsed into the state of unconsciousness. His attacks of violence and transient blindness were associated with the trauma. He was able to recall that it took place in 1918, twenty-three kilometers from Metz. He remembered also that he got the command at seven o'clock in the evening, twilight being the time when he got the largest number of spells. He remembered also being in very good spirits. A short while after being given the command it was revoked. He recalled stopping for dinner and having carrot soup. It was stormy and dark, and shells were bursting around him. He climbed up a hill, then heard the word, "Duck, duck!" This latter detail of being on the verge of an incline and hearing the word "duck" recurred in several dreams. He also remembered that the terrible night was Monday and that he woke up two days later in a straitjacket, a considerable distance away from the original site. This was in a dressing station. When the patient first woke out of his conscious state, he said he was "like a rubber ball." When anybody touched him he "would jump sky-high." Completely disoriented, he did not know his name, could not walk, fell over objects, stuttered, vomited, and talked in a childish gibberish. His reactions were those of a severely frightened child about two years of age. He did not have any persistent paralysis. The whole world seemed to be full of danger; he showed a trait very commonly found in these cases, also in certain cases of epilepsy. He readily identified himself with anyone meeting with an untoward accident. Thus, on one occasion, the patient was on the street when somebody was struck by an automobile. He immediately began to run as though pursued by someone. He ran for blocks and then dashed into a hallway, where he recovered enough to ask for some water. He was in no danger at all; the other fellow was being hurt.

He recalled that, after being confined in a straitjacket for some time, he

was released, whereupon he ran away. He did not know where he was running nor why. He was caught and taken back to the hospital, where he said someone tried to reassure him by showing him a dead man—a most inappropriate piece of active therapy.

Concerning the original trauma, a few more details were uncovered. He remembered that he was in the second line trenches; that a dud came over, fell near him, and threw a great deal of mud on him; and that he was, in all likelihood, trampled over by his comrades who were running away from the dud. Many other details he could not unite with the original trauma, but, as far as could be learned, the patient was not blown up by a shell. What had probably happened was that he was given a command to go over the top, which he did; that, as he landed in a second line trench, a shell came over but did not explode, landed near him, and splashed him with mud; that in the confusion he was thrown down and trampled upon by those around him.

Furthermore, the patient's attitude toward work is notable. He could not resume his former occupation, and all his efforts at rehabilitating himself in a new occupation were unsuccessful. He had the typical attitude of inadequacy to work. The accuracy of manipulation of his hands and fingers and his ability to coördinate them in any form of manual work were markedly impaired. He described a phenomenon I have encountered frequently in the dreams of traumatic neurotics, namely, certain days occurred on which everything would go wrong, on which he was incapable of holding objects in his hands; he would stumble over everything and would break things, very often to the detriment of his employer. Extremely slow at work, he would labor for hours over something which normally should consume only a few minutes. Needless to say, the patient was able to bestow but little interest upon his working activities. An interesting feature about this case was that the words most common in the patient's vocabulary were those describing combat and struggle. He was always "fighting something through," "winning something." The successful accomplishment of a task was described as "murdering it." This is also an interesting specimen of the perseverative tendency of the traumatic case and also of the epileptic.

Thus, in the patient's adaptation we see a tremendous battle against the environment and a complete inability to exert a high degree of control over part of his personality—that part concerned with the mastery of the environment, even in the form of a feeling of security or in the ability to perform any persistent work. Accordingly he endured the frustrations impatiently; impediments to the ease and comfort of his external existence were tolerated with particular difficulty. He responded with exaggerated and disorganized affect to physical hurt. Any trifling scratch or slight to his person would throw him into a panic. He suffered extreme fluctuations of temper from great violence and anger to maudlin tenderness. For example, he cried for three

days when he had to have his dog killed, and he melted with tears when he witnessed a funeral procession. His emotional ties had a conspicuous poverty; but this impression may have been produced by his conflict with the external environment which, for the time being, overshadowed his social relations with people. All his reactions were either sadistic or masochistic. Moreover, the patterns of his love life and social life were probably drawn from those of his relations to the outer world.

After observation for about a period of five months his nightmares of sado-masochistic content ceased, and he was able to sleep the greater part of the night, and his spells had subsided to a large extent. The issue of compensation was, however, a great obstacle to the cure of this patient. He frequently understated his improvement, for fear that if I reported him well, he would lose his compensation. Thus, after an absence of seven months, the patient alleged that he continued to have spells; but on inquiry his wife informed me that he had not had a spell for five months. One must, furthermore, note that during the early course of the treatment the symptoms increased in severity. By that I mean his anxiety and distress became much more severe. The capacity for displacement, anxiety, and transference were the means of his partial rehabilitation.

Most of the patient's symptoms were reactivated on the occasion of a mild trauma. One evening he was in a taxi which collided with another vehicle. His old panicky reaction returned. All his symptoms, dreams, spells, and secondary defenses recurred. He was in such a disturbed condition that he had to be taken to Bellevue Hospital and kept there for several days. Prior to this time he had had no spells, slept well, ate well, had ceased his vomiting, was free from cardiospasm, and was becoming much less sensitive to noise. This new trauma, however, did not have any lasting effect; after a short period his condition was about the same as before discontinuance of treatment.

We must emphasize especially the existence of defects in the patient's adaptation prior to the onset of his illness. They existed together with a pronounced poverty of achievement. He had many vocational difficulties and educational handicaps. I was not able to elicit, during the time of treatment, any reasonable account of why he left home at an early age, except that it followed the death of his mother and that he did not want to live with his father. His early epileptiform attacks indicate already a marked constitutional factor and the projection of the bulk of his conflict with the outer world.

When the patient first presented himself, we found a neurosis with the following characteristics. The patient was evidently in severe conflict which he had partly succeeded in repressing. The only idea-

tional representation of the repressed material was to be found in the conscious recollection of the trauma. Against this and against any situation which resembled it, he directed all his energy. He had almost a complete amnesia for the traumatic event and the reactivation thereof was met with the same resistance we encounter in the transference neuroses when a deeply repressed factor is approached.

The content of the material which the patient was trying to keep from consciousness was chiefly the traumatic event. This need not be inferred; he was quite explicit about it. When his vigilance was somewhat relaxed as in sleep, he was disturbed by hallucinatory reproductions or faintly disguised and displaced representations of this experience.

He had several typical types of dreams: a) the dream of annihilation; b) the dream of aggression with punishment; c) the dream of cruel activities or hostile wishes against those whom he loved best, associated with strong guilt affect.

In the dreams of annihilation he was awakened, as usual, by the desire to evade the threat of extermination. In the dreams of punishment we have a replacement of the aggression onto another object; the aggression is now turned upon the patient himself. This is a complicated phenomenon to be treated at length later. The hallucinations of fingers pointing at him also belong in this category. In the third type of dream the transformation of this aggression toward the love object occurs with the accompaniment of intense guilt which is unbearable and tortures him throughout the day. To note the point at which these guilt dreams occurred in the course of the neurosis is very important. They were most persistent during the time when the patient made an active transference onto me and became dependent upon me for help. Thus the patient is trying to repress an instinctive urge, which to the outer world expresses itself as either aggression or fear of annihilation but when directed toward his love objects, takes the form of cruelty with the corresponding reaction formation of great tenderness and pity. Thus, he cries when his dog dies.

What the patient expresses in the form of guilt to his love object he expresses to the outer world as a fear of annihilation. The guilt is, thus, the expression of the aggressive impulse directed toward

an object whom the patient needs for his protection. On the other hand, the aggression itself is apparently caused by the failure of the object (mother) to intervene between him and the hostile environment. In either case he feels helpless, and devoid either of resources to master the world or of a protector who will do it for him, he is justified in feeling the world to be a hostile place. This fear of the outer world is really another way of indicating that he has lost the means of mastery. Such a state of affairs we showed to be the case in the dreams of a man who was suffering from a vascular disease which he knew to be progressive and fatal (see pp. 77-78).

Hence the conflict in the annihilation dreams is, therefore, the repression of the persistent urge to master the world, at least sufficiently to be able to live comfortably in it, and the patient's incapacity to do so by virtue of the inhibitions initiated by the trauma. The patient thus makes a compromise with the assumption toward the environment of a passive attitude which cannot be represented in another way than by annihilation. In his behavior toward the environment the individual has not the leeway that he has in the sexual domain, where the repressed aggression takes the form either of guilt or of the assumption of a feminine attitude. In this instance we see a familiar phenomenon in the compulsion neurosis in which the guilt feeling the patient has to his love objects is due to the expectation of being loved by those objects toward whom he has repressed, however, a strong aggressive tendency based on the frustrations. Hence the reaction formation in the guise of excessive tenderness. But the passivity to the outer world cannot be thus elaborated. If his aggression—by which is meant merely organized mastery—to the outer world is inhibited, he can only remain in contact with it at all by compelling it to maintain him without his own efforts, just as it did when he was an infant. But then the entire outer world was encompassed in the mother. In this way he re-established, to a degree, his shattered relations to the external world. The dependency upon compensation is thus a defensive measure. By his infantilism he wants to compel the mother to pity him and thus force her to take him to her again. His normal aggression to the outer world being blocked, he reinstates a childish attitude of dependency on his wife, mother,

physician, government. That the trauma symbolizes birth in this case, there can be no doubt; for under no other conditions is there such a sudden release of aggression due to helplessness and so extreme an attempt at mastery by way of the oral zone.

The inhibitions to maintaining a normally aggressive attitude, which means just normal activity, to the outer world shows itself in tremors, slowness of motion, vertigo, clumsiness, inability to hold objects in his hands, spells, and so on. As secondary defenses against this repressed aggression we see a reaction not unlike the feeling of guilt. He defends himself against the onslaught to the environment by a sensitivity to stimuli, by a rigidity to posture and motion, by a complete disorganization of his responses, and by an attempt to exclude the outer world by means of attacks of transient blindness or spells of unconsciousness, in which state alone the patient is able to carry out the mastery in the form of disorganized activity by breaking, tearing, smashing, and so forth. One must especially note the tendency which this patient has toward oral destruction. He tears objects not only with his hands, but he takes them into his mouth, he grinds clothespins, he tears sheets with his teeth. All these defenses cover up an anxiety which, however, remains accessible. This anxiety is, *par excellence*, an indication of the amount of organization which remains in the ego. We shall return subsequently to deal with this problem at length. Whereas this patient's anxiety is always at hand, in other cases we find that the anxiety once present has completely disappeared beyond resuscitation. Yet clinical symptoms exist not unlike those described in this last case.

We can attempt to evaluate the pathological processes in this case from the viewpoint of 1) discharge phenomena and 2) regression. If we consider the aggressive outbursts as discharge phenomena, we must first account for the tensions which accumulate. These give no direct evidence. We know only of certain things which the patient has lost the capacity to do. Can this be the source of the accumulated tensions? They cannot possibly come from any other source. For these activities are slow, gradual, integrated release phenomena which make up the bulk of sheer existence. The evidence for their contraction exists in the form of the lost aptitudes to work and activity generally.

We can say, therefore, that these normal activities are organized, integrated, and purposeful discharge phenomena which, being blocked are now replaced by disorganized, purposeless, unintegrated activities like discharge phenomena in appearance. So the problem of discharge reduces itself to a problem of form, organization, and purpose. The purpose is gone because the utility or pleasurable objective seems to have vanished.

The question about whether these phenomena are to be regarded as disorganized or regressive will be taken up later. Meanwhile it is essential to recognize the difference between these phenomena and those encountered in the transference neuroses. Here we find no slow, gradually integrated use of a type of adaptation used in infancy, and which yields gratifications similar to those earlier ones. If we predicate a regression we must, moreover, be able to identify the infantile prototype. In infancy there is a stage of mastery which consists of tearing, breaking of objects, prior to the development of dexterities which extract a higher pleasure or utility value from the organized manipulation. The child gets much satisfaction from these early activities. One could, therefore, say that these disorganized aggressive phenomena represent a regression. If so, it must be added that there is no such gratification in the traumatic neurosis, because the utility of the object and the utility function of the executive apparatus cannot be exploited. It produces nothing but frustration. On the other hand true regressive phenomena do occur in the acute phases of traumatic neurosis. This is illustrated by further material from the case described earlier in Chapter II, page 54.

The patient furnished a retrospective amount of his experience immediately after the trauma. Following his shock he was in a state of unconsciousness for an inestimable amount of time. When he first awoke, he was not aware of the existence of any individual part of his body. He first described it as a "feeling of complete paralysis," but this was not really the case. The fact is that he had no body consciousness, but regarded his body as in infancy, a part of the external environment; thus the whole series of integrations with which the infant learns to identify parts of his body as appertaining to himself was completely ruptured. Not only could he not move any of his limbs, but he could not localize them; he did not have any idea of voluntary action, and although he retained some degree of cutaneous sensations, he was unable to localize it or to do anything to remove the source of irritation when it arose.

He remembers, on such occasions, being very uncomfortable, but he could not tell on which side of the body the irritating stimulus was situated. That is, in order to remove an irritation of the left thigh, he did not know how to turn over on the right side. In short, voluntary motion was impossible because he had lost all awareness of his *body-ego*. During this time he was incapable of carrying out the simplest purposeful movement, including sphincter control. This paralysis notwithstanding, a loud noise would throw him into a chaotic response, during which he would sometimes fall out of bed. If it were possible to have kept a complete record of his activities at that time, the patient would undoubtedly have shown first the elementary body movements and would have demonstrated the course by which they are synthesized into the motor melodies making up most voluntary action.

With regard to the interpretation of stimuli coming from the outer world, the patient was at first likewise impotent. He could not, in the beginning, differentiate between the various forms of stimuli and reacted in the same way to most of them. He remembers hearing noises but could not distinguish the difference in quality of sound. The sound of a bell and the sound of a human voice were more or less alike to him. He heard people talking, but he could not understand what they were saying. His response to sudden noise was very much like that of a child—chaotic, incoördinate, purposeless series of movements.

He appreciated light, but he did not know the meaning of the objects in the room as regards their usefulness. He remembers that he was able to differentiate heat and cold; that he was able to touch and to feel objects, but was unable to grasp or hold them or to identify their use.

He could not swallow; he had to be tube-fed. He vomited most of the time. Then spoon-fed for a while, he only gradually learned to put food objects into his mouth. At first he did not appreciate the difference between night and day and was entirely unaware of the passing of time. He was unable to interpret olfactory stimuli. It is interesting to note that the objects in his room looked very different to him immediately after he regained consciousness. The patient was unable to describe just what he meant by this. But judging from what several other patients have told me, he had no idea of perspective, and objects appeared either confused or in two-dimensional form or entirely detached from their meaning, as interpreted by the idea of use. *He was unaware of any relation to these objects; hence they were meaningless.* We can infer that his knowledge of spatial relations was completely destroyed; this disturbance apparently involved not only a loss of the capacity to interpret perspective—the knowledge of the motions of his own limbs in connection with objects was also destroyed. The optical pictures of reality were nullified, as were the optical pictures which must perhaps be associated with kinesthetic sensations.

The patient gradually learned how to interpret external stimuli and to re-integrate his body-ego. Voluntary motion was extremely slow in development, and within a period of two months he was hardly able to get out of bed. When he attempted to walk he found that his limbs would not support him. He had a complete incoördination originally, a complete astasia-abasia, and only very gradually did he learn to walk and to execute coördinate movements of varied complicity. His ability to write was especially slow to return; in fact, the very last to return. This entire process took several months.

While the patient was in bed, he remembers being subject to an almost constant sensation of vertigo aggravated by changes in position, as when he was turned or lifted. At these times the sensations were constant. He described several forms of vertigo—a wavelike vertigo, a circular vertigo, and a lateral vertigo.

After hearing repeated descriptions of his vertigo, I could not but feel that what he was trying to describe was a loss of sensation of weight and of the feeling of various parts of his body. Thus he would say, "I feel as though I were walking on air."

No fear existed in conjunction with this vertigo. This feature, vertigo, has almost completely disappeared but does recur periodically just before and immediately after his spells of unconsciousness. After his unconscious spells is a mild recurrence of almost all the phenomena which occurred during his initial hospital residence; that is, marked incoördination, astasia-abasia, vertigo, a period of mild dazedness, inability to interpret external stimuli accurately. I believe that this feeling of vertigo depends largely on the loss of kinesthetic and visual pictures of the melodies of voluntary motion and is not, therefore, a vertigo associated with the semicircular canals.

The patient describes his state of mind during his hospital residence as, "At that time I could not think at all. I had no feelings." The noteworthy feature of all this is the interesting relationship between the development of the thought process and the development of an integration of the body-ego.

We shall return to this case for the discussion of many issues. Suffice it, at present, to say that, from the point of view of the genesis of symptoms, the original effects of the trauma—the complete disappearance of all the integrations which produce voluntary motion, that is, the integration of the body-ego; the reduction of his capacities to those of the newborn child; the gradual relearning process and reintegration of the ego and the periodic return to this state—are unique in my experience.⁵

⁵ This patient was repeatedly demonstrated to classes in psychiatry at Cornell University, 1923-1928.

Among the character changes which the patient described above, the following is the most striking. Prior to his trauma he was hot-headed, easily excited, and popularly known as "quite a scrapper." Especially interested in sports and mechanics, he was decidedly not a bookish person. He was not introspective. Thought and feelings did not interest or concern him nearly so much as things and activities. He seemed much more interested in objects of the outer world than in his mind.

Since his trauma he has tried to keep alive his interest in things, especially in mechanics. However, he finds himself unable to consummate his interests. He is now no longer physically bold, but he is keenly interested in devising *labor-saving implements*. This is the only instance I have ever found in a traumatic neurosis of a constructive use of a disability. He seeks now to make something which will compensate for the wounded part of his ego. A labor-saving device compensates for an awkwardness of exerting or an incapacity to exert one's own limbs. This is as close as one can come to the mechanism of "sublimation" or refinement of the instincts of mastery. This easily represents an attempt to compensate for his diminished capacity to adapt himself to the external world. His fatigability, tremors, and vertigos prevent him from doing any strenuous work.

Now, what takes place in this case is indeed a regression, but a regression of the entire ego. The latter is disorganized in this case to a degree which, we presume, exists at birth.

The regression may halt at certain phases of adaptation of early childhood. McDougall has been able to report several such cases, where the entire adaptation, method of locomotion, speech, manner of eating, play with toys, behavior generally, regress to a period of childhood, varying in different cases. I have not been fortunate enough to see such cases. But the path of regression here is, as we see, very different from the path of regression in the transference neuroses. McDougall (62) described such a state in a patient who became completely mute after his first bombardment. After a second shock he behaved like an infant in every respect for about a year. Unfortunately McDougall's case contains no record of the patient's convalescence and no account of the symptoms present after he had emerged from his infantile state.

When McDougall first saw him he described the patient as follows:

"He showed no trace of comprehension of spoken or written language and uttered no sounds other than 'Oh sis—sis—sis'; . . . he seemed to have little or no understanding of the use of ordinary objects and utensils, most of which he examined with mingled expressions of curiosity and timidity . . . when put on his feet he walked jerkily, with short hurried steps, the feet planted widely apart. As soon as allowed to do so, he slipped down upon the floor and crawled about on his buttocks with the aid of his hand. . . . He could not feed himself and was fed with a spoon by the nurse. . . . The expression of his face conformed to the rest of his behavior. . . . He slept soundly at night and during the day would pass quickly, almost suddenly, from animation to deep sleep. He wept like an infant when a nurse accidentally stepped on some of his horse pictures and upon other similar occasions. He was sometimes playfully mischievous. His digestion was easily upset; and if he took other food than milk, broth, and slops, he would complain of pain in the belly, suffer from wind, and would curl up in bed. He was very easily frightened. He shrank in fear from dogs, furs, a negro patient, the stuffed head of a stag, and from all sudden and loud noises the cause of which was not obvious. This timidity was the main obstacle to progress; for on each occasion of being frightened he relapsed to his completely childish condition and had to begin growing up afresh. . . . After such relapses his progress was usually more rapid than before, that is, he quickly regained most of what he had lost in the relapse."

To recapitulate: The traumatic event creates excitations beyond the possibility of mastering, inflicts a severe blow to the total ego organization. The activities involved in successful adaptation to the external environment become blocked in their usual outlets. These activities are executive in character and take in the entire apperceptive and executive apparatus, the sensory-motor, the higher intellectual centres, and the autonomic system. These activities are consummated in some form of *aggression*. This *aggression* is expressed in every function of the sensory-motor apparatus and its adjuncts, the central and autonomic nervous systems. This aggression is, moreover, capable of infinite degrees of refinement and is progressive with the growth of the child. The adaptation to the external world is the result of a complicated series of integrations, which owe their existence in part to the narcissistic gratification of success. As a result of the trauma, that portion of the ego which normally helps the individual to carry out automatically certain organized aggressive functions of percep-

tion and activity on the basis of innumerable successes in the past is either destroyed or inhibited.

The adaptation to this situation takes on various aspects in accordance with different factors. A diminished capacity to exercise the functions that can yield gratifications in the world exists, together with a constant desire to have done with the world completely and, at the same time, to adapt the self on a level compatible with these altered resources. In the paralytic types (sensory or motor) such adaptation is most successful and consists of an obliteration of only a portion of the world, namely the offending part; but the rest of the world can still yield its gratifications. This is really a negative form, autoplastically done, of mastering the world or rendering it harmless. The patient throws away or sacrifices a piece of his ego, the introjected world, to maintain a certain equilibrium.

The wish to have done with the world in many instances takes on a phobic form, with the constant but ineffectual effort to re-establish harmonious relations with it. This is affected by a regressive process of a) making fewer demands on it, b) by re-establishing an infantile relation to it. This means that the higher, more elaborate adaptations are so inhibited while the more primitive ones are so reactivated that in the end only two modalities exist: mastering the world or being annihilated. The phobic character is emphasized by the higher investment of all seismic and sensory apparatus, irritability, and the lower types of mastery, disorganized aggression. In this type the attitude to the world is ambivalent, if one may so describe it.

In another type the wish to obliterate the world and to re-establish amicable relations with it takes the form of a total obliteration of the world episodically or periodically, in the form of syncopal attacks and a renewal of the whole process of attaining from the beginning gratifications from the world. The syncopal attacks not only symbolize or enact death but also rebirth. The process of obliterating the world is here complete as well as renewal of the whole process of adaptation.

TRAUMATIC NEUROSIS AND EPILEPSY

One final point needs elucidation: What is the relation between the epileptiform types of traumatic neurosis and the true epilepsies? We

must, therefore, consider whether or not in genuine epilepsy there are any more data as to what happens when certain functions of the ego are incapacitated through an interference with their somatic basis by an organic lesion, in contradistinction to the traumatic neurosis, in which the interference seems to be a protective inhibition of the psychic portion of these functions. To survey the literature on epilepsy would in itself require a volume. We can review only the most important contributions which touch on our own investigations.

Most epileptologists assume an organic basis for epilepsy, though neuropathologists have failed to find constant or specific pathological changes. This negative finding is of vast importance. If a great variety of lesions can produce the same type of reaction, the reaction must be a general one of the entire organism and not due merely to local disturbance, whether circulatory (including, of course, the spino-meningeal fluid), plastic, or metabolic. Neurologists have concentrated most of their attention on the neural paths of the discharge phenomena. The four types of theory held by them are (55): a) that the reaction is due to a summation of *irritations*, a theory based on the Jacksonian syndrome; b) the *release* theory, based on the analogy with decerebrate rigidity, that the inhibitory influence of the cortex is removed (K. Wilson); c) the "*short circuit*" theory, which holds that the explosive effect is due to localized interruption of association fibres in the central nervous system; and d) the *metabolic* theory, which asserts that the seat of the decompensation is in the cells and is due to anoxemia, alkalosis, or anaphylaxis (Frisch). In addition, there is Muskens' theory that the epileptic attack is an elaboration of the myoclonic reflex.

The clinical pathologist brings no new methods to epilepsy. Those he uses are transplantations from internal medicine. His procedures are therefore purely empirical. The findings are not constant, nor do they have any recognizable relation to each other. Findings like alkalosis or changes in salt metabolism in no way constitute direct indicators of the pathology and are a dubious basis for anything but symptomatic treatment.

The status of epilepsy in clinical psychiatry is rather ill-defined. As a nosological entity it is isolated, and efforts to establish relation-

ships or enlarge the concept of what constitutes an epileptiform reaction are based entirely on descriptive resemblances. Vagus attacks and migraine on the one hand, and on the other, contradictions of consciousness due apparently to emotional disturbances, have been considered epileptiform manifestations. [Kleist (53), Jelliffe, Bonhoeffer, Bratz.]

A psychological approach to epilepsy is justified nevertheless not only if we grant the possibility of its organic nature but even if we accept as a premise its determination by organic, that is, plastic or metabolic, changes in the central nervous system. This premise of organic determination does not explain the effects of the condition on the personality as a whole, nor does it cast any light on those crises which unquestionably arise from purely psychic stimuli. Furthermore, even if we assume that the basic factor is organic, we cannot use this fact to account for the changes brought about in the individual's adaptation in any *direct* manner. If a defect is present at birth, we have a right to assume that it will greatly influence the entire development of the personality. An organic defect in the light of psychology can only be regarded as a special form of interference with certain executive weapons of the ego which influence the ease, speed and effectiveness of adaptation. In the traumatic neurosis we have demonstrated that the use of these weapons may be inhibited by purely psychic factors. But even an *organic* lesion must have certain definite characteristics before it can give rise to epileptic symptoms. The epileptologists agree (see Frisch, 40) that it must be located in certain convulseogenic areas.

A well established fact is that not all organic lesions of the central nervous system give rise to epileptic symptoms. We can, therefore, accept the organic as a basis of essential epilepsies, but we must evaluate it as only one type of interference with the executive functions of the ego. Such interference, owing to the peculiar interplay between anatomical structure, the uses to which it is put, and the drives it satisfies, may be of a purely psychic fabric. This can be proved by the empirical result of therapy on post-traumatic epilepsies. Such interference, organic or psychic, cannot but make a severe disturbance in the instinct life of the individual.

The psychoanalytic literature on epilepsy suggests various avenues of approach. The formulations of Clark (14) are based on the Freudian conception of schizophrenia. The special characteristics of the epileptic which, he asserts, antedate the seizures themselves and may be present from birth, he designates as "epileptic narcissism"—"an excessive reaction formation against all previous traumas, birth, breast, bottle, diaper, and so on." The seizure itself is a regression to "metroerotism," its economic purpose the repair of the damage done by the trauma.

These formulations say nothing that is essentially untrue; their defect lies in the fact that they dress descriptive psychiatry in psychoanalytic terminology. A dynamic relationship between the so-called "epileptic character" and the theory of narcissism is nowhere demonstrated. The path of regression is nowhere described and one is obliged to ask the question why one narcissistic regression should lead to a schizophrenia and another to an epileptic reaction.

Stekel's (87) work on epilepsy contains some very important contributions. The content of the epileptic seizure, he finds, may be a crime, a forbidden sexual act, a punishment by God (and thus a symbol for death), or a repetition of the act of being born. Stekel notes the importance of infantile traumata for the development of the epileptic reaction; the epilepsy forms successive protective layers about them. He lays great stress on the aggressiveness of the epileptic, the tendency to rage, hatred, and violence, combined with a heightened feeling of guilt and reaction formations against these tendencies—the excessively affectionate platitudes and religious affectations. If the epileptic relives a traumatic event in a spell, the spell becomes more pleasurable. Stekel makes an effort to account for the disposition of the aggressiveness but fails to give any account of its origin. It is, therefore, part of the "character."

Schilder's (84) work is a decided departure from that of Stekel and Clark. He is of the opinion that epilepsy is an organically determined syndrome. In his studies on postepileptic twilight states, he notes that the fantasies deal with ideas of destruction and rebirth, the latter being bound up with crude sexual formulations. These fantasies may be projected in the manner characteristic of schizophrenia, as a *Weltuntergang*. Schilder notes a compulsion to activity, a subjective

maniacal experience at the end of the twilight state. He places a different construction on his observations than do Clark and Stekel; the content is interpreted as a representation or projection of those biological changes associated with the experience of the seizure itself.

Furthermore Schilder (84) notes the marked apperceptive disturbance in these twilight states. This he interprets as an effort for a more complete understanding of the outer world. In the twilight states libido has been withdrawn from portions of the perception ego. He sees in epilepsy a return of the confluence of body and world. There is a persistent wish to have done with the outer world altogether, a tendency checked by the libidinal ties to it. He notes the perseverative tendencies. The bigotry and righteousness are reaction formations against the desire to overwhelm the world. The speech disturbances are like the aphasias; the word withdraws itself not only as word idea, but as word form. The epileptic's social life, guided by the ego ideal, is patterned on the relations of the ego to the external world. This ego ideal is fortified with narcissism.

Freud has said comparatively little about epilepsy. In *The Ego and the Id* (37) he has one sentence: "We perceive that for purposes of discharge the instinct of destruction is habitually enlisted in the service of Eros; we suspect that the epileptic fit is a product and sign of instinctual de-fusion; and we come to understand that de-fusion and marked emergence of the death instinct are among the most noteworthy effects of many severe neuroses, e.g., obsessional neurosis."

In *Dostojewsky und die Vätertötung* (39) Freud deals with the criminality of the epileptic. Dostojewsky's choice of material is an indication of his criminality. His destructive tendencies are turned upon himself in the form of masochism and *guilt*. Freud is of the opinion that epilepsy may arise from somatic conditions and from psychic ones, such as *fright*. The mechanism of abnormal instinct discharge may arise from a disturbance in brain function, or from an inadequate mastery of psychic economy. In both types of origin he sees the similarity of the underlying mechanism of instinct discharge (*Triebabfuhr*). Freud believes the epileptic reaction to be the expression of a neurosis whose characteristic is to discharge through somatic channels masses of excitation which cannot be mastered psychically.

Freud (39) in this article shows us how the epilepsy is brought into relation with the Oedipus complex, how its content (death) is a punishment for the fantasied murder of the father, and how, in the case of Dostojevsky, the epileptic satisfies his guilt by a persistent and ineluctable masochism. These observations can be verified on any epileptic. However, these observations of Freud are concerned chiefly with *content*, whereas the essential problem in psychopathology here is one of form, especially so since the content is the same as in other neuroses.

The uses to which the epileptic puts his symptoms does not, however, solve the problem of their highly specific character; nor does it tell us why he has his epilepsy and not a compulsion neurosis or schizophrenia. We cannot be dealing merely with the quantitative problem, namely, that the aggression in epilepsy is greater than in compulsion neurosis. The epileptic manifestations are brought into closest relation with every aspect of the psychic life of the subject, and from this we must assume that the epileptic basis was present during the time these constellations were formed and in all likelihood influenced their particular character. We can bring evidence from the traumatic neurosis to bear on this question. The "epileptic character" is acquired by patients with this neurosis after the trauma; the trauma struck a completed organism without time to weave it into all the libidinal relations with the world. The aggressiveness of the person with a traumatic neurosis has the same fabric as that of the epileptic; but for all that, we do not see it turned upon love objects or transformed into masochism and guilt. In the traumatic neurosis this aggression has not come under the influence of the superego. In this neurosis, moreover, we were led to believe that the apparently enormous increase in aggression was related to the impairment in ego functions which have already lost their usefulness.

In the psychoanalytic discussions on epilepsy the attempt is usually made to account for the symptoms on the basis of the libido theory. That is, the individual's development is traced as regards the distribution of the sexual impulse in the face of social discipline. This is no differential feature and hence such descriptions can only tell us how the particular epileptic in question handled this phase of his development; but it does not tell us anything about the epilepsy itself.

The specific pathology of epilepsy must be sought elsewhere than in the development of the sexual instinct. The concepts of the libido theory are not geared to deal with the phenomena that are apparently specific to epilepsy.

For the purpose of allocating the essential disturbance in epilepsy the study of the following case might be useful. The features to be watched are those which indicate faulty development of mastery techniques.

The patient suffered from seizures, both grand mal and petit mal. She was thirteen years old, well developed for her age, and had no physical defects.

She was the fourth child of a family of five, all the others being entirely well. Her family history was negative. Her mother was quite confident that ever since infancy the patient had shown herself to be different from her other four sisters. Although the mother had borne five children, she had suffered during the gestation period with none but the patient, at which time she had had a mild toxemia of pregnancy with gastric symptoms, general irritability, and "nervousness." This pregnancy occurred, moreover, during a time of considerable external stress, for her husband had been out of work for a long time.

Labor was not difficult, delivery being without instrumentation. The patient was not breast-fed at all but bottle-fed for a long while. Weaning was exceedingly difficult and effected completely only at three and a half years of age, the last six months of which were occupied with rubber nipple sucking. The patient was an exceedingly active child, constantly moving and fidgety and very early in life showed a tendency to violence, first in the form of biting and later of striking and beating any offender. She was also exceedingly mischievous and destructive. One of her favorite pastimes was boring holes into the plaster of the walls.

She began to talk at six months and walked at eleven months. During the first years of her life she had great difficulty with her diet. She suffered from colic and constipation persistently for years. She never had convulsions in infancy or early childhood in connection with colic or teething. Control of sphincters was attained with no great difficulty. Her intelligence was good, in fact, precocious.

Of her character prior to the onset of her illness, the patient's mother states that from early life she had shown traits which persisted in a more intense form. She was very restless and showed overactivity of the entire muscular system, a condition which her mother believed responsible for her frequent falls from highchairs and hammocks. At six months she had fallen from a considerable height and was speechless for a long time. Such falls were fre-

quent. Her mother noted no such proclivity for falling in any of her other four children. In sleep as well as in waking hours, she was restless.

She had always been an exceedingly jealous, fighting, sensitive, and selfish child and extraordinarily fearful of physical pain. The sight of the merest scratch, pinprick, or stick of a knife or needle would evoke extreme pallor and trembling, and recovery was slow. A very pugnacious child, she found it difficult to forgive or forget anger and injury. She was particularly exacting about neatness and cleanliness of her clothes. In her games she always had to be the winner and could not tolerate being pronounced wrong on any occasion. She was not, however, the kind of child who ran to mother to have her wrongs righted; she was not as dependent on maternal affection as the other children. Tantrums and violent tempers were frequent on insufficient provocation.

The circumstances under which her illness appeared were as follows: One year prior to her first visit to me she was subjected to what will readily be conceded a traumatic event. One of her friends owned a bulldog who often played with the children. One day the patient was playing with the dog's owner, who in fun "sicked" the dog on the patient. Frightened and with the dog barking at her heels, she ran through the hallway of her house, up four flights of stairs and down again, and all out of breath landed in her apartment in a state of collapse, pale, palpitating, and speechless. Her mother investigated the incident and learned that the dog was a friendly dog, probably excited by the patient's running away.

Immediately after, the patient began to show signs of a disturbed state of mind. Her sleep was interrupted by distressing dreams of being chased by a mad dog, from which she would often awake continuing the dream in the form of a hallucination. She would wake the household with her loud screams. The content of these dreams changed. Sometimes someone was going to steal her: "I was going to die." "Terrible things were happening to me." Sometimes she hallucinated dogs at night. During the daytime she feared dogs, but she did not flee from them. She trembled on seeing them.

The mental disturbance immediately following the traumatic event continued, and within three or four days after the fright she fell into a swoon without movement or convulsions. From that time until one year later she was subject to petit mal attacks to the extent of five to ten a week. Then she began to have grand mal seizures, all nocturnal, about two or three weekly. The grand mal attacks came in clusters, with long remissions.

The character and behavior changes which ensued with the onset of the petit mal attacks were exaggerations of traits existing prior to the trauma but which now took on a vicious and more intense form. The terrifying dreams continued with the same content. As a result, she developed a defensive insomnia which kept her awake three to four hours after bedtime. When she slept, she was very restless, tossing and kicking, easily awakened. Occasionally

she would remember the dreams preceding the grand mal attack; they were of the usual terrifying character. She became exceedingly sensitive to sudden stimuli. A loud noise, unanticipated, would shock her; someone calling her name suddenly or touching her from behind had the same effect. Changes of bodily position, such as bending down and getting up, or getting up from a reclining position, were accompanied by dizziness. Vision was often blurred in transitory fashion. (This was subsequently learned to be a self-induced state, accomplished either by voluntary pressure on the eyeballs or burying her head in a pillow upon awaking.) This illustrates the principle of the utilization of a handicap for the premium of pleasure. It always took her a little while to acclimate herself to her surroundings immediately after waking up. Looking persistently at an object would often make her dizzy or induce diplopia. Her dizziness she described as "seeing waves on her side." This meant that the objects looked at had a wavy motion, particularly on the outer rim of her visual field. Looking persistently at a light made the light grow progressively larger.

In addition to this state of irritability to external stimuli in the environment, her motor reactions became more intense but not directed toward any special stimulus. She was constantly fidgeting, crossing her legs, uncrossing them, biting her nails, shifting her position, standing or lying down, moving her hands, tapping, swinging her legs, knocking them against each other, and so on. Her temper grew progressively worse and the tendency to motor expression in the form of shouting or striking grew more pronounced. She became more quarrelsome and selfish and unable to admit herself in the wrong or to admit a fault.

Her mother noted a most important change in her character. "A. . . . was much more grown up before the fright than she has been at any time since." Until the fright she had been interested in schoolwork and was able to concentrate and learn everything easily except arithmetic. After the fright and the ensuing epileptic symptoms, she had a distinct reversion to earlier types of interest. She gave up learning, both her schoolwork and the piano, and reverted to activities discontinued two years previously, such as playing with dolls, jacks, and checkers. These now became her chief interests. She was always distracted, and her attention was difficult to engage. Fairy tales were her preference rather than books of adventure or romance.

In regard to the petit mal attacks and their provocation, the following history was obtained from the patient and her mother. They often recurred without special provocation and without special relation to the current circumstance or her reaction to it. However, the petit mal attacks were apparently more frequent when she became distracted and when her attention was disengaged from external situations. Concerning spells of this character, no amount of questioning could elicit any indication of the nature of the thoughts

or fantasies that initiated the attack. Usually she would have no recollection of having had such an attack.

She was, however, able to recall petit mal attacks which seemed to be responses to a given external stimulus. Persistent efforts of attention would often result in an attack or in an abortive attack indicated merely by a transient dizziness and a sickening, nauseous sensation in the abdomen, followed by belching. More often the spell would occur apparently as a reaction of inadequate motor discharge and mental elaboration (transferability) of an emotion. The most common occasion was anger. She would often pass from a state of intense anger into a petit mal attack, preceded by dizziness. During the spell she would be completely impervious to external stimuli, her limbs would stiffen slightly, her hands usually would turn to the left automatically, and her eyes become glazed in a stare. After a few seconds of this she would be dazed for about a minute or two and usually lose the trend of what engaged her attention prior to the spell. During these moments she was extremely uncomfortable, restless, yawning abundantly for one or two minutes. The following incident was the occasion of a petit mal attack. She was always particularly exacting about how her dresses should fit. One morning the sash of her dress was tied in front, where it rubbed against her knees as she walked. This irritated her exceedingly, and she told her mother about it; and her mother suggested that she tie the sash in back. The child insisted it be tied on the side. Her mother opposed her wish. She became angry and had a petit mal, meanwhile forgetting all about the sash. When I questioned her, she said she had become very angry and wanted to hit her mother, "but instead of hitting her I got a spell."

After I had learned something about the situations which provoked the petit mal attacks, I deliberately set about to create such a situation artificially through the use of her transference to me. An occasion presented itself one day. She was asked to tell me what had occupied her during the two days intervening between visits. She told a very casual story of eating, sleeping, and playing. Her mother indicated to me that she had omitted some important event of the last few days. A . . . persistently denied that anything else had occurred. Her mother then volunteered that A . . . had had a violent quarrel with another girl somewhat older than herself. When asked why she omitted this incident from her account, she said that she knew quarreling was wrong. She then said that she was marking up the flagstones in front of her house with chalk, when the janitor's daughter, fourteen years old, came out and ordered her to stop. A . . . insisted for one reason or another that she was justified in continuing her game. I decided on this occasion to scold her soundly, telling her that she was in the wrong, that the other girl was right in making her stop the game, that she ought to know better, and the like. All this was said in an angry tone. She lay on the couch speechless and forthwith had a

petit mal attack, out of which she came making grimaces at her mother, evidently completing her vengeance upon her for telling me about the unfortunate incident. After she had sufficiently recovered from her petit mal, I apprised her of what had happened and asked her to tell me what passed through her mind as I scolded her. To this she could not reply, except that she "didn't feel very good," and no amount of encouragement would induce her to abreact upon me any of the anger she had tried to repress. However, the events of the following day indicated that my scolding had made a profound impression upon her. Two days later her mother came with two bits of news: The first was that during the past two days A. . . . had been better behaved, less irritable and quarrelsome, and more obliging than at any time in years; the second was that she had had many petit mal attacks and two grand mal attacks and that upon waking out of the last one the morning of the visit, she complained bitterly to her father about me. She told him how rude and cruel I had been to her and justified her conduct to him.

I then explained to her that I had scolded her deliberately to teach her why she had these petit mal and grand mal attacks, that I wanted to teach her other ways of reacting and called her epilepsy by the name of a "bad habit." I assured her of my deep interest in her and that I was wholly bent on doing for her what was best. With this reassurance, she proceeded more willingly to tell me of her feelings towards me during the past few days.

At first she was rather timid and stated that when I had scolded her "she didn't feel so good;" then she remarked that she couldn't forget my angry voice for a long while, that she had thought about it and been angry at me all day and had fantasied beating me. When asked why she had not called me the names she subsequently thought of and why she did not actually beat me, she replied that she could not possibly do that, since at the time she could not think. She was evidently dazed by my rebuke and took refuge in her petit mal. After this reassurance she left in a friendly mood, after communicating to me many things she had previously tried to without being able to bring to mind.

Her grand mal attacks were all nocturnal and took place in the hours between 5:00 A.M. and 7:00 A.M., most of them at about ten minutes of 5:00 A.M., a time corresponding to the milkman's rounds. There would be a generalized convulsion, with frothing and tongue-biting but no relaxation of sphincters, followed by marked dyspnea and choking sensations. During the early weeks of treatment the circumstances preceding the grand mal attacks were impossible to learn. But after her reactions were better understood, one could predict with fair certainty the kind of external events to which her reactions were inadequate and which would probably result in a grand mal attack.

I have described generally her extreme intolerance of physical hurt and

general chaotic response to all sensory stimuli stronger than customary. This characteristic had many elaborations and could readily be identified in certain transference reactions. While she was attending school, the authorities submitted all children to the Schick test which, as we know, involves being pricked by a needle. She carried on violently while it was done and returned from school quite ill.

She had several severe spells following this. From her reactions it could readily be seen that she could react the same way to an injury to another person narcissistically identified with herself. Although the patient had had no grand mal attack in three weeks, it was safe to predict an attack on this occasion.

She was told by one of her playmates that one of her friends, a boy of fourteen, had been run over by an automobile. She became obsessed with the description of how it happened, could not sleep at night, and saw me the next day in quite a disturbed frame of mind. She could only say that she pictured the injured boy in bed and felt the shock to his mother and that upon hearing the news she became nauseated, saw double, grew dizzy, but did not faint. No urging could get more out of her. She did not cry or look sad or depressed. She had a grand mal attack during the same night and a petit mal attack while telling me her story.

A feature soon felt in her mental life was the peculiar character of her fantasy life. Not very rich or elaborate, her interests and fantasies were rather stereotyped. Of the moving pictures she saw, she remembered chiefly fighting, accidents, collisions, battles, and the like, although she often referred in a perfunctory manner to the hero or heroine. She still read fairy tales persistently, and though she spoke of the prince and princess and the happy ending, she was a great deal more interested in the snakes, dragons, witches, spooks, pygmies, and funny faces. In fact, fantasizing about "funny faces" was one of her favorite pastimes. During her sleepless rests in bed she would evoke these fantasies of horror, unaccompanied by fear of anxiety, until she fell asleep. "I can't sleep until after I see them, and then I turn over and dream about them." These fantasy activities were of the same nature as the repetitive dreams of the traumatic. They followed the pattern of actively repeating a trauma first passively experienced, a reaction characteristic of the infantile method of overcoming traumatic experiences.

Another favorite activity was to press her eyeballs with her fingers for a while, then look up to see the objects in the room blurred or double. She often did this before she went to sleep. She did it once in my presence, while I was talking to her mother. She interrupted the conversation to tell me of her sensations, her face pallid, with an expression of mingled fear and delight. This sensation is undoubtedly related to the petit mal attacks. It likewise belongs to the infantile pattern of making the best of a lower plane of adaptation—to

describe pure stimulus pleasure at the expense of deleting the meaning and pleasure value of the objects seen.

After the disease had lasted about two years, the patient became more and more subject to clouded states and finally died in status epilepticus.

The features I wish to emphasize in this case are those in common with the traumatic neurosis. The disease received its final form in the petit and grand mal attacks on the occasion of a fright. The patient had dreams which repeated the trauma or variations of it. She had an "epileptic character" before the trauma, to be sure, which became especially marked after it. The irritability was marked, as was also the chaotic response to painful stimuli. She showed a complete incapacity to have done with the trauma. She possessed marked hypermotility and destructiveness since earliest childhood, extreme aggressiveness and pugnacity, and a flight into the spell when she failed to get adequate expression for them. The regression of interest is likewise significant.

But this patient showed a trait which must be emphasized. In many of her activities she attempted to turn her disease symptoms to good account by endowing them with a highly pleasurable interest. These activities were:

1. The spontaneous and voluntary production of dazed and blurred vision, in imitation of her vertigo; her pleasure was obvious.
2. The use of purposeless movements of the hands and legs for pleasurable purposes.
3. The indulgence in masochistic fantasies and the emphasis on the ugly, hideous, and harmful.

The relation of the trauma to the patient's disease and dream life showed a striking resemblance to that described for the traumatic neurosis. Her reaction to the trauma, however, was an exaggeration of a reaction previously characterizing her adaptation. As her history shows, her adaptation had been, as it were, a series of responses to little traumata. The recurrent dreams show her to be more fixated on one trauma—the fright of the dog—than on any other. Dreams of this type occur in early epilepsies without any known precipitating trauma; in fact annihilation dreams (or aggression dreams, the two being identical psychologically) are not specific to epilepsy or trau-

matic neurosis. I have cited a case of fractured skull and a case of arteriosclerosis in which these dreams occurred.

The following case illustrates the dreams of an epileptic whose illness was of three weeks duration when first seen and in whom annihilation dreams preceded the first seizure by several months.

The patient was twenty-one years old, a nurse, the fourth of seven children. Her family history was negative. Her childhood was uneventful; she had had the usual diseases with no untoward effects. She had had no difficulty at weaning or in controlling her sphincters in childhood. She had been a mischievous, headstrong, obstinate child, always disagreeable and always insistent on having her own way. She bore disappointments poorly. She had no infantile phobias and was not especially timid. As she grew up, she became rather high-tempered, easily excited, readily angered, and prone to motor expression of anger. She was rather envious in nature and not religious. She remembers no fright or trauma in childhood. She stood physical illness well. She was particularly worried about family and economic affairs. In reference to her sex life, she denied masturbation, fantasies, or sex experiences of any kind. She was not attracted to the opposite sex but maintained friendly relations with a young man during the few years previous.

Her first symptoms began at nineteen with spells of vertigo coming on at various times, apparently with no relation to external events. Her menstrual periods became especially difficult to her. She had severe unilateral migraine headaches and shooting pains in her head, both lasting fifteen to twenty minutes. Her stomach was "out of order" for some time preceding her spells. She had attacks of palpitation without anxiety. She had felt generally "stiffer" for some time and had hallucinatory paresthesias, especially tingling of the tongue and heaviness of the lower jaw.

For the two months before I saw her, she had felt vaguely unwell, with a sense that things were unusually difficult for her, although she noticed no change in any particular aspect of her life. She knew of no external or internal conflicts.

Sleep had become more difficult in the months prior to her visit to me; it was especially difficult to fall asleep. She had always been a prolific dreamer but could not remember her dreams. For several months she had been having nightmares dealing with annihilation. "I was out with a friend swimming. I began to drown. I cried for help and awoke frightened." The content of other dreams was of robberies, murders, and of those closest to her being killed. Her brother, to whom she was much attached, was constantly being killed in her dreams. Some time before the first spell she dreamed that she was tied to a stake and being beaten. From these dreams she would awaken crying and could not fall asleep again; then she would dream the same dream

over again or would begin dreaming where she left off. Three weeks prior to her visit, while in a theatre with a friend, she "didn't feel right." She began to shake and felt dizzy. She walked out, stood in the lobby for a few minutes, then fell into a heap. Short tonic and clonic stages followed. She had seven attacks since, none preceded by an aura besides vertigo, with an abrupt loss of consciousness lasting fifteen to twenty minutes. She comes out of a spell disoriented and dazed. Objects near her "move about," things appear double, "the place does not look the same," "I don't recognize myself or the place I'm in." On one occasion she had three spells within as many hours. A deep sleep of several hours duration follows a spell.

Her disturbing dreams continued: "I went to the beach and went out too far. I cried for help, but I couldn't get any. I awoke frightened." Her paresthesias have continued especially in the right hand. Parts of her body felt "numb and dead." Very easily fatigued, she tended to become stiff all over if she sat quietly. She was restless, easily frightened by noise, and apprehensive when she saw a person or an animal hurt or injured. Her vertigo was vestibular and kinesthetic: "I don't feel my body. I feel as if I were walking on clouds or left hanging in the air." She described a queer spasm of the mouth. No petit mal attacks and no break in thought continuity occurred. She became more irritable and cranky, intolerant of noise, and was awakened by the slightest stir in the house. The periodicity of her attacks was quite obvious. All attacks or groups of attacks came exactly a week apart. There were no displacements in phobias. Her anxiety related to her illness, for she believed the prognosis of epilepsy to be bad.

In contrast to this case let me refer to the conversion hysteria of a patient who had recurrent fainting attacks based on a father identification. Her father had suddenly died of cardiac disease ten years before. A marked mother attachment displaced onto her sister was the motive for the identification with her father. She had no convulsion but lost consciousness abruptly with a constant aura of shooting pain about the heart. She had a hypochondriacal phobia of heart disease. She had no disturbing dreams, no irritability, no outbursts of temper, no autonomic disturbances or paresthesias, and no sensitiveness to noise. She would awaken from her spell tired but not dazed or disoriented, and she did not sleep after it. The faint represented a definite sexual urge and object attachment with no resemblance to epilepsy in any way.

CONCLUSION

The material given up to this point permits us to state our problem more concretely. Such a statement will help us formulate the direction in which we must look for a theoretical reconstruction.

The reactions to traumatic experience have shown us that in a cer-

tain number of well-defined clinical pictures the damage is inflicted upon certain basic ego functions which, as a result of the trauma, become protectively inhibited. This protective inhibition is as characteristic of somatic portions of the ego (fractured limb) as of ideational processes (repression) which are utilized by the ego. The traumatic neuroses demonstrate the *elementary* forms of these contractile processes, together with the disturbances created in "instinct" discharge and the efforts at restitution. In the traumatic neurosis this injury is still fresh, that is, no time has lapsed in which its effects can influence the remaining aspects of the ego; the trauma strikes an already completed organism.

The principle of the traumatic neurosis can be traced from minor traumata to the more severe, as in the case of a fractured skull. The repetitive dreams, irritability, and so on, are always present. The resulting inhibition may be localized and involve a circumscribed action (for instance, horseback riding) or may be more general and include the functions of the ego involved in the more highly integrated sensory-motor-integrative formulas. The contractions may involve not only specific action integrations but entire functional units (sensory or motor organs) and, in the epileptiform reactions, the entire sensorium. These inhibitions have certain secondary effects; the autonomic system may remain the avenue of discharge—or in the epileptic reaction, the voluntary muscular system—without, however, being regulated or modified by the sensorium. Secondly, the tensions thus inhibited are discharged in disorganized aggression in the intervals between the seizures.

From the point of view of dynamics the epileptic reaction is not so isolated. In epilepsy we have the most extreme of these contractile reactions, which we may consider a process very like repression. But the interference with function in epilepsy has two distinctive characteristics: a) It is probably organic in nature, and b) it is much older than in traumatic neurosis and has had an opportunity to influence the development of the entire personality. Moreover, in epilepsy the aggression has been subject to secondary efforts at binding, either through the influence of the "superego" (guilt-masochism) or "sublimation" (Dostojevsky).

PSYCHOSOMATIC MEDICINE MONOGRAPH II-III

PART II: THEORETICAL

IV. THE DEVELOPMENT OF THE EFFECTIVE EGO

INTRODUCTION: METHODOLOGY

THE MATERIAL presented up to this point can hardly be considered complete even as far as the phenomenology of the traumatic neurosis is concerned, for the more delicate our criteria the more detailed our observations would be. But even though incomplete, we have enough data for a theoretical reconstruction of the dynamics of this syndrome. Some essentials of the probable dynamics we have already indicated but so far have not presented a consistent theory.

A good theory must satisfy several requirements: It must be consistent with the data; the data and the theory must be mutually translatable into each other, for if they fail to do so all we can expect is not a workable theory but an explanation which cannot be a guide for action. The theory for this particular traumatic syndrome must, moreover, be consistent with the theory of the neuroses generally, for it is inconceivable that special adaptations are devised for this neurosis, based on principles that cannot be identified in any other syndrome. This last condition—the consonance of the theory with a general theory of the neuroses—promises a good deal of trouble.

A theory in psychopathology is generally constructed as follows. There is: 1) the *direct experience* of the subject; 2) *his behavior*; 3) *constructs*, which are abbreviated symbols for complicated entities which occur very often, such as the concepts *conflict* or *unconscious*; then there are 4) *operational concepts* and finally 5) the *explanations*. The operational concept is an organizing tool; it supplies a focus for arranging the phenomena. Such a concept is "instinct." And the explanation attempts to establish the relations into which the recorded events enter. This can be done in symbolic, analogical, pictorial, dramatic, or dynamic manner. Only the latter type of explanation is of use for therapy and research, and is naturally the type toward which we aim.

Little difficulty is likely to be encountered in either the direct experience or the behavior of the subject. Constructs, to be useful, must be defined carefully. Most of our difficulties are likely to be encountered in connection with the operational concepts and the explanations contingent upon them.

In connection with operational concepts we are obliged to make a crucial decision. Since we have been operating with psychoanalytic constructs, we run into great difficulty if we attempt to use the cardinal psychoanalytic *operational concept* of instinct (or Trieb=drive). Freud explored the vicissitudes of the sexual "instinct" during the development and growth of the individual with great precision. He was able to do this because the modalities of the sexual instinct could be identified through qualities derived from parts of the body (erogenous zones). He operated with the assumption that "instinct" involves the *cause* of an activity, the *goal* of the activity, and the *specific manipulations* necessary to carry out the activity. The sexual "instinct" moreover had a definite somatic reference, although there was, and still is, considerable confusion about the somatic *source* of the "instinct" and its *executive*. Time has proved that some of the phenomena which Freud considered attributes of "instinct" now must be considered attributes of the personality as a whole. Moreover he recognized that there were instincts other than sexual, generally grouped under the name of "ego instincts," whose attributes were not defined, whose ontogenesis could not be traced, and whose vicissitudes could not be followed. In other words, the criteria he worked out for the sexual instincts failed in their application to the "ego instincts" and the nominal recognition of this latter group could be put to no effectual clinical use. This failure was a signal to Freud that something was wrong with the use of "instinct" as an operational tool; but its triumphs in the past made it too valuable to discard, and instead he substituted a certain philosophical reconciliation of the discrepancy by calling the sexual and as yet undefined ego instincts "Eros," or life instincts, in contrast to the death instinct, which attempted to reinstate the inorganic state. Whatever the merits of his latter theory, its clinical application is extremely limited save for "explanations" that owe no responsibility to clinical procedure. It is not an instrument for

unearthing new facts or establishing new relationships, because it does not analyze the specific activities necessary to carry out the drive. In the case of the sexual drive, its vicissitudes could be followed with sufficient accuracy with the qualitative criteria furnished by the libido theory. Eros and death instinct are still further removed from the clinical facts.

As a consequence of this failure, the traumatic neuroses fared badly in psychoanalysis. Overshadowed in importance—save in time of war—by the ubiquitous transference neuroses, its nosological position was unsettled, being considered variously a narcissistic neurosis, an actual neurosis, or a hysteriform condition. The psychopathology was considered, notwithstanding nosological concessions, a special case of what happens in all other neuroses. Therapeutic procedure was a hangover of the abreactive measures usually induced by hypnosis, to which the theory had little, if any, relevancy. The early efforts of Abraham (28), Simmel (28, 86), Ferenczi (28), and Jones (28), were inconclusive, and Freud himself struck a new note on the whole subject in 1921 (36), by calling attention to the fact that the essential characteristic of the catastrophic dream of the traumatic neurosis is that the normal defense against stimuli (*Reizschutz*) had been broken through, and that the neurosis consisted of the consequences of this rupture, and the subsequent efforts at mastering the vast quantity of stimuli that overwhelm the subject. This was by far the most valuable idea ever advanced about the nature of the traumatic neurosis. It did not, however, solve the problem; for Freud gave no indication of how this defense against stimuli was built up, what were its manifestations in the fully developed organism, and furthermore how this conception could be reconciled with the theory of instincts. It is this gap which this book purports to fill.

The distinguishing feature of Freud's instinct theory is that it is based on a conative—which denotes appetitive striving—and not a structural principle like sensation or reflex. But like the classical psychologies and behaviorism, psychoanalysis is an atomistic psychology which attempts to derive complex entities from the action of a synthetic principle (association, conditioning, integration) on or about a basic unit. This made particular difficulties because the basic unit

(instinct) could not be observed directly, but had to be deduced from those compounds that made up the bulk of the direct experience of the subject. Hence the conative and qualitative elements were stressed and the structural elements underplayed, if not ignored, because except for conversion hysteria and depersonalization phenomena, this aspect of the personality as a whole, the actual executive apparatus, was not conspicuously involved in the pathology. That is, it was only the uses to which this apparatus was to be directed which came into question, but not the apparatus itself. The difference between the two can be illustrated as follows: In the first case a man cannot strike his neighbor because there is a law or convention against it (social control); in the second, he cannot strike the blow because the apparatus for action has been impaired somewhere in its complex organization. Hence the diagnosis of qualities was a sufficiently accurate guide in the case of the sexual instinct, but hardly in the case of the "ego instincts."

In the case of the sexual "instinct" then this procedure was quite successful, and were it not for the fact that there was no psychopathology of the "ego instincts" (self preservation, hunger satisfying activity, aggression, or any organized activity) the operational effectiveness of the instinct theory for all types of clinical phenomena would hardly have been questioned. If we attempt to apply the instinct theory to the traumatic neuroses we immediately run into difficulty if we try to operate with the "instinct" of *self preservation*, which is apparently the instinct involved in this neurosis. Here the conative element, though easily conceded by common sense, is very elusive; the pleasure element is not confined to specific erogenous zones; there is no pursuit of an orgasmic objective, the somatic reference as to source is extremely diffuse, though executive systems could be located; they had predominantly a utility and not a pleasure function. So that the description of the so-called instinct reduces itself to a description of *specific activities*, and the organs or systems through which they are executed, from reflexes to those of the most highly integrated intellectual character. We cannot use the concept "instinct" in describing these complex activities with the same hope of success as we did in the case of the sexual drive and whether it creates in-

compatibilities with the instinct theory or not, we are obliged to use another technique. Since most activities are obviously learned and integrated slowly during growth and development, it is more difficult to isolate the instinctive quality. This failure of the concept "instinct" is an instance of how an operational concept and the primary data are not translatable one into the other, and illustrates one of the penalties for using a conative principle as an atomic unit to reconstruct the molecules of experience. It was bound to fail in the traumatic neurosis no matter how wide a connotation one gave the concept "sexual." In the case of the traumatic neurosis, unlike the others, the façade is made up of modalities of *activity*, and a conative principle is not suited to the analysis of these modalities, the essential manifest properties of which are morphological and not conative or qualitative. We lack the guides of erogenous zone qualities, and those attempts to explain this neurosis with the aid of the theory of instincts only succeeded in isolating the so-called stage of development at which a probable arrest took place. Such an analysis leaves the essential phenomena of the traumatic neurosis unaccounted for.

Fenichel (23) has made an excellent summary of the generally accepted psychoanalytic views on this neurosis. But we must here note that a trauma is defined as 1) anything that stimulates the infantile sexual impulses and 2) anything that increases anxiety which relates to infantile experience, *i.e.*, factors which accentuate bad conscience, which emphasize the reality of castration, as loss of parental love or the protection of destiny. This definition of trauma is one that we cannot accept, because it assumes that the *only* place where the individual can suffer frustrations in his ontogenetic development lies in the pursuit of organ-pleasure, but that those aspects of adaptation which have to do with successful accommodation to the outer physical world are subject to no developmental vicissitudes or failures, and that gaps, inhibitions, compensations cannot exist in these more elementary aspects of adaptation and the organ systems by which it is effected. Or at best they must inevitably be related to the particular pleasure zone dominant at each particular phase of development. It also assumes that the social control of impulse, first by the parent and later by its internalized representative—the super-ego—are only factors which

determine the distortions of development. As a result of this assumption—one which cannot be maintained by any who have had actual contact with them—the traumatic neuroses had to fit into the mould of the other neuroses. The primary force in creating this neurosis, like all others, had to be the necessity of the individual to submit to the social control of impulses; the rôle of actual failure of executive resources in the adaptation to the outer world has no place in this theory. Even if we accept this theory, it does not account for the phenomena of the traumatic neuroses. There is fortunately another alternative. We can solve the problem not by compelling the traumatic neuroses to fit the mould of the other neuroses, but by using operational concepts that fit the phenomena of all neuroses equally well. This program necessitates some alteration in our operational concepts, and hence gives a new direction to our explanations. Since a conative principle ("instinct") fails us in evaluating the phenomena of the traumatic neurosis we can essay a structural principle, and allow the conative element to exist in the form of an implication *that whatever structural elements we examine are in themselves already manifestations of the implicit drive*. This is another way of saying that our operational concept is *drive plus action syndrome*. But since the drive is implicit no matter what the action syndrome is, it is only the latter which furnishes us reliable differential criteria. It is much less of a risk to use the morphological principle and leave the drive implicit, than vice versa. Nor need we be too squeamish about the use of large molecular units—action syndromes—which are complex in their composition, if they are serviceable, rather than atomic units (instinct) which are useless because they cannot be identified in the clinical data, or because they furnish too few differential criteria.

Instead of the "instinct" as an operational unit, we can use the *action syndrome*. Instead of the criteria of the erogenous zones, we can study how activity to the outer world is integrated, and study the vicissitudes to which this development is subject, particularly those attendant upon failures.

For the time being we can defer the issue of how this fits in with the general theory of the neuroses (see pp. 177-205).

WHAT IS ADAPTATION?

In order to discuss the dynamics of the traumatic neurosis we must first have a working definition of adaptation pertinent to those vicissitudes we have observed. *Adaptation is a series of maneuvers in response to changes in the external environment, or to changes within the organism, which compel some activity in the outer world to the end of continuing existence, to remaining intact or free from harm, and to maintain controlled contact with it.* The changes that take place within the organism, such as anabolic and catabolic processes or those that govern the relations between the various organ systems, can hardly be considered adaptation; but they have a decided bearing on the adaptive activities of the organism to the outer world. The need for nutriment, the perception of which can be designated as a *need-tension*, determines a group of activities in the outer world specific to each organism.

The activities of the organism are qualified by the nature of the contacts it is phylogenetically equipped to make with the world by means of receptor and effector apparatus. Receptor apparatus serves the end of orientation and perception of qualities and the effector apparatus to subject the outer world to its own ends. Another portion of the adaptive apparatus has a coördinative function. It is through the coöperation of these three systems that the outer world acquires a *meaning* to the organism. The meaning of the outer world varies, depending upon the degree of refinement of the contacts the organism is able to establish, the dexterity of its effector apparatus and the effectiveness of its coördinative functions. When the outer world becomes meaningful in connection with sensory, interpretive and manipulative functions, this meaning takes on a characteristic which may be designated as *utility*. The organs or systems through which this utility is realized may be said—among others—to have a *utility function*. No part of the organism is devoid of this function, but they vary in degree. In man the eye, hand, lower extremities and ears have the highest utility function. The effective exploitation of the meaning of the outer world through the utility function of organs can be

designated as *mastery*, a construct which means a controlled exploitation of objects in the outer world.

Adaptation to the outer world—exclusive of the social environment where the process is much more complicated—can be generally classified in certain gross modalities. 1) Active mastery is one in which the utility of an object can be fully exploited, *e.g.*, eating or making a tool; or circumventing the interference of another object, successful combat. 2) Passive mastery, such as flight, escape, or avoidance through immobilization, of a noxious object. Both these types can be effective and the organism remain intact. 3) But the organism can also be overwhelmed and destroyed. 4) The organism can remain intact, life continuing, but the adaptive maneuvers are *altered*. This latter modality of adaption corresponds to neither of the other three and is the form we encountered in the traumatic neurosis. In order to understand this type of adaptation we must examine how the receptor, coördinative, and effector systems are integrated into effective action syndromes. This is a genetic problem. Then we can study the relation of these data to those found in the traumatic neurosis.

DEVELOPMENT OF ADAPTIVE PATTERNS

It is an obvious fact that man's adaptive patterns are in a constant state of change from birth on, although some of them become stabilized in childhood. The reason for this constant change is that his resources change through growth. He is born helpless, and although the phylogenetically predetermined organic substratum is present, the actual techniques and manipulations must be learned and gradually integrated into effective tools. The concept "instinct" does not cover that learned processes although we can safely predicate a drive. The development of these adaptive processes must be studied genetically in order to understand the various places at which failures or arrests may occur. We must study the conditions under which these action syndromes—our unit of study—can and cannot be formed, the conditions that maintain them or permit them to disintegrate, and the consequences of these various vicissitudes on the personality as a whole.

At birth only the automatic functions—anabolic and catabolic—are effective, with the aid of a few reflexes, the chief of which is sucking. The infant's adaptation is passive as far as the outer world is concerned; it has no controlled contact with the outer world except insofar as this is mediated through the mother. It cannot choose, avoid or seek out objects in the outer world necessary for its survival. Even heat regulating apparatus and certain metabolic processes are not stabilized (Cannon).

Being born may be said to have already interfered with the equilibrium of the intrauterine state, because stimuli are now registered on the organism from within (hunger) and without (cold). To relieve these need tensions the infant must lean periodically to the outer world, or show signs of the unpleasant effect created by them. To food brought to it the child can respond by sucking, for which the nerve paths have already been myelinated.

The whole process of myelination in man is very slow, (51) not being completed until the third year. This fact is signal for human development, though it may not alone be responsible for its specific course. The motor nerves myelinate first, the sensory later. This anatomical fact has a special significance; it increases the adaptation possibilities enormously; it means that action is learned in contact with the environment and is not phylogenetically predetermined. Creatures whose myelination is completed shortly after birth have fewer adaptation possibilities. This fact, however, introduces an element of chance in development and introduces more places where failures can occur. On the other hand it guarantees a closer tie between environmental conditions and the action syndromes necessary for survival. It makes the period of dependency longer, but it guarantees greater plasticity and augments the adaptation possibilities. Generally the functional capacities run parallel to the degree of myelination—at least for a time [Monakow (65)]. In premature births myelination takes place in a shorter time. If light is admitted into one eye of a mammal and excluded from the other, the fibres of the former myelinate more rapidly than the other. This phenomenon means that motor development is effected with a psychic and personal counter-

part; it also means that this aspect of development is vulnerable to insults.

The newborn already has reflex mechanisms (9) 1) for excluding stimuli: closing the eyes on a strong light; 2) for continuing a response, like deep breathing when smell is stimulated; 3) an uncoordinated "discharge" on sudden noise, which is either the Moro reflex or the "startle pattern" [Landis (54)], and finally crying and kicking.

The first zone at which any organized reaction takes place is at the mouth. Sucking is reflex—though it may take some time to establish. But at this very first zone we must note that the reflex activity is not independent of success or failure. If the child fails to grasp the nipple after two or three attempts, it becomes stuporous, and after several failures the reflex sensitivity of the mouth disappears [Ribble (78)]. The sleep under these conditions differs from the satisfied sleep after feeding. Breathing is irregular and the skin pale. The successful feeding reduces the hunger tension and to it is added a new quality, *satisfaction*, and at the mouth perhaps a specific pleasure quality. If the whole process succeeds there is an eagerness to renew the activity when the tension arises again, a *recognition* of the satisfying object (mother—breast—bottle) and an effective attachment to it. The events after success and failure are quite different, and are quite like the results reported by reflexologists. The failure is followed by an inhibitory process, one of the immediate consequences of which may be profound shock. A similar mechanism of inhibitory processes may be at the basis of marasmus.

The integrative processes at the receptors eye and ear are somewhat more complicated, and their steps can only be approximated. Following an object, the development of accommodation, then the ability to seek out objects, eidetic vision, are recognizable stages of seeing. The most important steps in connection with vision are appreciation of form and spatial relations, especially perspective. The latter function cannot be really effective until motility of the limbs is considerably advanced.

The sense of hearing has an important rôle to play in orientation. The first responses to loud noise are those of fright; but this response

tends to diminish in the first three months. The first reaction to succeed fright is that of *fixed attention* followed by expressions of pleasure. Then comes the ability to turn the head in the direction of noise and finally to seek the source with its eyes and fixate on it. This allays the disturbing effect of the noise. Rhythmic, repeated sounds elicit gratification, and moderate sounds which first occasion fright are subsequently enjoyed.

The chief characteristic of the adaptations of this period is that they are effected without coördinated motor activity, and consist of the organization of pleasant sensory stimuli at oral, visual and acoustic zones and a response in the form of laughter. Reactions to unpleasant tensions coming from within and without consist of discharge phenomena—fright reactions, crying, kicking.

In between these two types of response is the attitude of fixed attention. A stimulus first repudiated by defensive activities can by attention, repetition and memory traces of pleasure be *recognized* and then sought after and enjoyed. Laughter and the desire for repetition of the stimulus follow. Both repetition and laughter represent a stage of mastery.

The reaction of fright is quite different, and the only important thing about it is that if this reaction persists to the same stimulus, no organization for continuing the stimulus can be effected. The stimulus which first causes fright may later be enjoyed. This is another way of stating that some form of pain initiates inhibitions. In the fright reactions of infants the likelihood is that the sensory element in the painful experience retreats, the sense organ is protected, and the reaction terminates in a painful discharge. It is highly probable, therefore, that in infancy only pleasant affective repetitions lead to perception and to reproductory processes which aim to recall the pleasant experience. This does not mean that later painful experiences in activities which are unavoidable are not integrated. They are, in a highly characteristic manner (see pp. 123-129).

No definite evidence exists concerning the time when the infant is able to experience anxiety. It is difficult to identify the infant's reaction to tensions like hunger and frustrations as anxiety. Anxiety is primarily a reaction to a perceived or anticipated danger situation. Reactions

to painful situations are not necessarily anxiety. A stimulus may first cause fright, and later anxiety, if the fright-provoking agent can be identified. The same frightening stimulus may on repetition prove agreeable. Anxiety can occur only when the painful or threatening stimulus can be identified or anticipated. Strange or unfamiliar stimuli may provoke anxiety. Fright remains throughout life a disorganized response to sudden stimuli; anxiety can lead to highly organized defensive measures. To fright no organized defense is possible.

Whereas the infant cannot choose stimuli, it can utilize only those that are pleasant. In this respect it enjoys an advantage over the adult; it can flee painful stimuli without impairing its integrity. Fright reactions can take place at any time in life. By virtue of the fact that it is an ectoparasite, most of the infant's needs can be taken care of by the parent. This resiliency is lost by the adult, so that a traumatic experience striking an adult has a much thicker layer of protective devices to break through; but once having done so, the ego cannot dispose of it so readily as can the infant.

THE DEVELOPMENT OF MASTERY—AUTOMATIZATION OF FUNCTIONS (9)

We have noted that active mastery is one of the techniques of adaptation. Active mastery means the capacity to exploit the utility (or pleasure) value of objects in the outer world for one's own ends. In the development of this technique motility and manipulation play a decisive rôle. Both of these add much to adaptation possibilities, but they also increase the complicity of the outer world; they alter the meaning of objects in the outer world, their utility and pleasure possibilities. They also increase the opportunities for experimentation, choice, and failure.

It is on the motility and manipulative systems that the slowness of myelination has the greatest effect. Reflex grasping does not yet belong in the group of coördinated activities. Motility and manipulation add a new factor to the optical, acoustic, and oral experiences, namely kinesthetic.

The first types of motion that we can call purposeful are fusions

of certain elements of which we can identify three: 1) optical, 2) kinesthetic, and 3) memory of success or gratification. When these three unite in the interest of *purpose*, mastery begins.

When the infant learns to grasp after an object that already gave it pleasure, we now have a habitual mode of response, one portion of which is purely psychic—the memory of gratification and the urge for more gratification—and the other, written into a motion melody of following the object with the eye and grasping for it. The latter component becomes automatized, and in the organism as a whole a manipulative activity takes place which tends to restore the absence of tension. The reflexologists have established how such automatizations take place, the vicissitudes to which they are subject and the conditions that modify them. In comparison with what takes place in the infant in the automatization of pleasure-yielding action syntheses, there is no difference in principle.

Schilder (83-85) has pointed out that the building of these action syntheses is not always simple. It may happen that in carrying out certain motions, the pleasure value of individual components may outweigh others, with the result of enhancing the pleasure value of the completed action. Thus, when a child grasps an object with the hand, the optical portion of the experience may absorb much of the pleasure value of the hand motion. At one phase of development of this completed action, which starts as “instinctive” grasping, the optical value of the total experience may draw the greatest amount of interest. This fact is very important for the establishment of the sense of spatial orientation for various parts of the body in relation to each other and to the external world. The optical value of the arm is probably greater than any other portion of the body; the lower extremities have much less optical value, due possibly to the relatively late development of walking; the head has very little; and those mobile parts of the body that cannot be seen have no optical pleasure value at all.

In the infant the technique of mastery has two chief executive organs, the hand and the mouth, the eye being the leading auxiliary organ. The sense of vision determines chiefly what objects in the outer world will engage the child. Thus sounds do not elicit active response unless the source is seen; nor do tactile stimuli, though these latter

are not quite so dependent upon sight as are auditory stimuli [Bernfeld (9)]. In the fourth month of life the mastery technique consists of seeing an object, grasping it and directing it to the mouth. This may be called the phase of oral mastery.

One important fact must be noted in connection with oral mastery; objects placed in the mouth are not swallowed. Oral mastery is most prominent when sucking and swallowing are responses only to liquids of a definite quality. At the time when solid food is chewed and swallowed, the result of oral mastery is not devouring but pleasure sucking, nibbling, and holding the object for a short time at or near the mouth. Bernfeld believes that tasting plays a relatively insignificant part in this process. Neither can the relationship between eating and oral mastery be definitely established. After weaning some children have a tendency to devour everything—pennies, pins, and so on—but the meaning of this is still problematical.

The stage of oral mastery is important because it includes the beginnings of a process whereby the sense organs and erogenous zones have brought groups of perceptions and feelings into coördination under the domination of a central apparatus. At this stage the grasping of an object involves psychic processes involving the arm, hand, optical zone, and oral zone. The oral zone is the objective; the optical zone has a demonstrative function; and the motor zone, an auxiliary function. This is the first evidence of an integrated, meaningful action syndrome and it begins to function when the effect of visual experience, perceptions and the expectation of pleasure have become sufficiently large to release or inhibit specific motor effects [Bernfeld (9)]. In relation to certain perceptions and ideas a concentration of psychic energy has occurred, placing the motor apparatus in the service of the ego—the coördinator of action syndromes—now unified by a common integration of its component parts. The first form of wish fulfillment is direct and hallucinatory, the concept “I want” at this stage having no instrument other than reproduction. When other psychic processes are added at the stage of oral mastery the hallucinatory type of repetition begins to recede, and a bit of activity takes its place.

The next development is the use of the hand in the service of zones other than oral, and the use of the eye to seek objects for oral and

auditory gratification. Those objects not suitable for oral mastery are used for making noise, tearing, crushing, kneading, scratching and plucking. In primates these activities have a definite relation to oral activities, the object being to find out what things are edible. For this reason it is erroneous to call such activities *destructive*. They are more likely primitive, crude forms of mastery, when the meaning and utility of the object is limited.

The oral zone is the executive for tensions arising from within—hunger—and from without, external objects. As regards the nutritional drives, part of the objective is to re-establish a state of equilibrium in the internal environment, and part to continue stimulus pleasure at the oral zone. The disturbance in the internal environment which results in sensations of hunger gives rise to discomfort or pain, motor unrest, and then perceptions concerned with the release of this tension, first hallucinatory and then motor. The state of rest, when disturbed by hunger, is re-established by eating; it can also be disturbed, whether or not the internal environment has created the tensions of hunger, by objects seen in the external environment which release the wish for oral mastery. The objective of oral mastery is to remove the disturbing object from the effective environment (the range of vision) by rejection—partial or complete. Bernfeld distinguishes between oral mastery and oral annihilation. The distinction appears inessential.

The phase of oral mastery is important not only because it can be identified in the ontogenesis of the ego, but because it is helpful in the appreciation of some of the activities in the traumatic neuroses and epilepsy. In another chapter we described a case, in which the acme of “destructiveness” was reached in oral activities, and the patient bore witness to this fact by demonstrating a set of teeth worn down from chewing on articles of furniture, clothespins, and so on. Other patients could vent their aggression only by tearing, crumpling, smashing objects about them. Still another, who was long in an unconscious state, awakened out of it with an awareness of only one part of his body—his mouth—and possessed of an uncontrollable desire to break, tear and smash everything about him. About this latter case it may also be parenthetically added that one can appreciate the world with a single

ontogenetically old type of adaptation, in this case the oral zone, all others seemingly being blocked. This patient could not maintain consciousness at that level, all other perceptions being either meaningless or painful, and during his convalescence he continued swooning until other adaptations were re-established. This same patient remarked that in addition to having no awareness of any part of his body apart from his mouth, he could not interpret the scene that struck his eyes, no knowledge of perspective, so that all objects were "flat" and confused. He heard people talking but did not understand words—"They sounded like fog horns." This inordinately strong oral adaptation of the traumatic neurotic is a symptom at once of his convalescence and regression. The return of this phase of ego development, however, is associated in the traumatic and epileptic with the greatest distress, unlike the infant, to whom it brings a feeling of triumph and an enhancement of self-esteem.

One of the results of the series of integrations described is that the child eventually gets to appreciate that it is a distinct entity apart from other objects in the world. Ferenczi has described certain aspects of the development of the sense of reality, and traces several basic constellations formed in the child derived from the complicated relationship with respect to the mother and the outer world. He describes changes in perception, ideation, affective attitudes of the infant coincident with changes in function and capacities of the developing organism. The outer world and body ego come to be known by the coördination of optical, tactile, and kinesthetic sensations in association with motor functions under the stimulus of needs and their gratifications. In early infancy I believe the rôle of disappointing experiences to be minimal. The rôle of pain in separating body ego from the world has been overemphasized in the literature. To be sure, the child learns in this way, among others, what does and does not appertain to him. But it is only one of his means; the other is the rôle of gratifying experiences, for only the latter are taken up for systematic integration. There are too many vague conditions that determine whether a given pain has value as a delimiting factor or not. Often one observes conditions that ought to evoke pain but really do not. Moreover, pain is able chiefly to institute inhibitions and defenses.

Much more important than pain is the remarkable discovery the child makes in the connection of a movement that is carried out with the sensory impressions received in so doing. Later a still more important fact is added which has a very high pleasure value. The carrying out of an action with all its sensory concomitants, optical and kinaesthetic, is associated with success, a gratifying result which gives rise to a triumphant feeling of making an organ obedient to the will of the ego. The variety and number of these associations eventuate in a definite self- or body-consciousness, which becomes the center and point of reference of all purposeful and coördinated activity.

One must not lose sight of the fact, however, that in this stage the body ego represents a fusion under a central control of what were originally a group of small entities with independent aims. In the most primitive form there was a series of independent little egos—a tasting-touching ego, a seeing-feeling ego, and so on. When a child tries to grasp an object out of its reach in the oral phase of development, it is not able to appreciate the distance between itself and the object, and hence the grasping motion fails. At this time the body ego has as its center the oral zone; then the eye is added to this zone as an auxiliary; then the neck musculature, the ears, arms, back, limbs and, last of all, the feet. The ability to use all of these combined in the interest of grasping the object represents a relatively high organization of the various components of the body ego. This process is capable of infinite degrees of refinement and complicity. Perhaps the last parts of the body that come under the government of the central ego are the feet and toes; thus they are treated as if they were foreign bodies for a correspondingly longer time.

Once the body ego is separated from the outer world and the various parts of the ego subjected to central control, the rest is simply a question of more and more complicated combinations. After sense perception and body control are sufficiently developed to enable the child to maintain equilibrium, two processes are of great importance in directing future developments. To be sure, this is a rather arbitrary way of fixing the time at which these two factors begin to operate. No such sharp line of division can be made, although it is likely that the establishment of equilibrium frees a large amount of energy for more

complicated forms of mastery. Whatever the time at which they commence to function, the factors responsible for further growth of the ego are *imitation*¹ and the *progressive growth of intelligence*, which is really the master coördinating apparatus.

We cannot but touch on the latter factor here. The intellect is undoubtedly the most important weapon of mastery that man possesses, having largely the functions of selection, inhibition, and preparation for action. The two specific characteristics of man as regards his mastery drives are the phenomenal developmental capacities of the hand and the intellect. Some authors are inclined to regard this not as a coincidence but as indication of a common source (50). In almost all languages there are words whose connotation is some form of psychic appropriation and which are expressed in some form of tactile or manual symbolism. A few of these will illustrate: the words, *grasp, impression, comprehend; Begriff, Vernunft* (from *vernehmen*), *zergliedern, auslegen, überlegen, Eindruck; percipere, comprehendere*, and so on.

The combination of intellect and hand has one important result as far as man's mastery of the world is concerned; he is able to make infinite extensions of the hand and special senses. The objective toward which this mastery is directed is to exploit the utility value of objects in the outer world. This utility value may be to devour, to render harmless, or to transform. In connection with this latter it has been observed that this tendency is really to reinstate the period of magic control of infancy. The combination of progressive and regressive tendencies can best be observed in those societies where the conquest of the external environment is most successful. Nature is subjected and conquered, the result of this entire process being a reproduction of the state of infantile magic, where the world obeys the will through the mere act of pushing buttons. However, there is a difference between the two states of magic control, the infantile and the one achieved through the subjection of nature.

One of the chief functions of the intellect in the establishment of mastery is its inhibitory function, a fact recognized alike by neurol-

¹ Bernfeld (10) uses the concept *identification* to convey the idea that the child does as it sees others do. This word is better reserved for the unconscious process, rather than the conscious process we are considering.

ogists, reflexologists, and psychoanalysts. Without this inhibitory influence, no integrative purposeful actions could be established. Important to note is that this inhibitory function is not synonymous with repression. Purposeful action represents not only direction and goal, but also the inhibition of a large number of adventitious phenomena. In training, which represents the shutting out of useless and superfluous action integrations, we can see not only the rôle played by the pleasure element, but that of the selective and inhibitory action of the mind. When this inhibitory influence is removed by the extinction of consciousness, the organism is capable only of defense reactions emanating from the lower centers. This is what occurs in the epileptic seizure.

As regards the rôle of imitation in the building of the body ego not much is definitely known. If, for instance, the mother makes a noise with a rattle and the child seizes it and continues the noise, this process is not a true imitation but an active continuation of the pleasure hearing. It seems to connote, "I also . . . and more." The child can do this only with such stimuli as do not provoke anxiety or fright. When we observe a child following an object with the head and eyes, in rapt attention, we see a phase preliminary to mastery. If mastery is interfered with by the incapacities of the child, the object is nevertheless retained by means of intensive psychic activity, to the enhancement of first its optical value and later its auditory value. In this type of instance Bernfeld (10) maintains that a partial mastery is effected by means of identification with the object. This process he calls *fascination*.

In the original reactions to noise we observe that the stimulus disturbs the state of rest, resulting in an effort to flee the stimulus. Later we find a receptive attitude to the same stimulus and an active production of the same. Between the two is a state in which, with anxiety and fright inhibited, there is active attention, fascination. This latter may be associated with inhibition of activity, an anxious or even uncanny feeling. This type of activity may eventually be followed by active imitation, *i.e.*, mastery by way of identification.

The type of reaction we see in infantile fascination persists throughout life, under conditions where mastery is impossible. One can lose

oneself in a given object or act, and thus establish a preliminary phase of identification. In this state one is outside oneself and most ego functions are inhibited, a condition closely related to hypnosis and sleep. One becomes automatic in following the motions of the object; it is a transient substitution of the ego by the object. It differs, however, from imitation in effecting no permanent changes in the ego. Fascination, however, may pass over into imitation, a process that probably has much to do with the learning processes associated with bodily posture, language, and so on.

Like fright, fascination is also dependent upon the element of unexpectedness or surprise. I recall the first time that I heard a certain symphonic poem in a state of fascination. Completely unaware of my surroundings, completely immobile, I had no idea of the amount of time that had elapsed, and automatically followed the movements of the conductor and orchestra. There was an enormous element of surprise and mystery. However, after I had procured a score of the work and studied it minutely, the element of surprise was completely gone the next time I heard it, and no fascination was felt. The same piece is now even a bit tedious to me.

Imitation and later identification play an important rôle in the development of mastery because they are processes which become incorporated into the ego-ideal. In relation to the instincts of mastery, as far as the body ego is concerned, the superego has no prohibitive or punitive function; its place is taken by the sense of reality and the objective of self preservation or security.

There are still some data that organic neurology can supply about the structure and functions of the body ego. We can select from this vast amount of data only a few salient and pertinent facts. Schilder has pointed out that certain lesions of the brain produce a diminution of impulses (*Antriebe*); whereas others, a superabundance of them, as in *hyperkinesia*. We know, of course, that the same conditions can be produced by purely psychic factors.

Schilder (83, 84) is of the opinion that the subcortical impulse is within certain limits displaceable, so that energy accustomed to discharge through certain established paths may, if these channels are anatomically blocked, be discharged through other channels. Mona-

know is of the same opinion. Thus a case of anatomically determined akinesia will, under slight provocation, give vent to outbursts of anger and violence. It would seem that energy suffering stasis in its customary channels can only be explosively discharged in a less organized manner. This fact is of great importance in evaluating the explosive outbursts of the traumatic and epileptic cases. In these latter cases the energy is psychically inhibited.

Organic neurology has a good deal of light to throw on the component parts of voluntary motion, and certain phases in the establishment of the body scheme. The facts of organic neurology indicate that the psychic counterpart of bodily activity has a more or less independent existence and may continue to exist long after the executive organ ceases to function. Furthermore, the sensations associated with a given portion of the body are intimately and inseparably tied to the site of its functioning. It is an old observation that patients whose extremities have been amputated continue to have the sensation that they are still attached to the body. A man who has had his foot amputated can continue to wiggle his toes. This is not merely a hallucinatory gratification of the wish to retain the limb or a denial of its loss, but a persistence of the kinesthetic sensations associated with its functioning. Another striking observation was made during the war when transplantations of skin from one part of the body to another had to be made to hide certain hideous deformities. Thus Ischlonsky (46) cites the case of a soldier whose nose, mouth and upper jaw were completely torn away by a piece of shrapnel. To reconstruct the nose they had to graft some skin from the forearm. Usually the skin flap on the arm is attached to its blood supply until the flap is able to establish capillary anastomoses on the nose; then the graft is completed and detached from the arm. If, after the new blood supply has been completely established, the subject is made to close his eyes and the grafted skin on the nose stuck with a pin, the sensation is reported as being on the forearm.

Organic neurology also confirms that voluntary motion is a synthesis of psychic and somatic components. From the phenomena that result from interference with one or the other of these parts we can infer that every motion has a formula [Schilder (85)]. There

must first be a visual picture of the limb or portion of the body that carries out the motion. There is some doubt about the kinesthetic element, some believing it present and others, not. Quite certain, however, is that the kinesthetic element cannot replace the optical image, though auditory and tactile stimuli can replace the visual to a degree. Then the goal of the action must be visualized and finally, the idea of successful completion of the act. Any completed action is, therefore, dependent on the body as a whole and depends on a proper evaluation as regards the completed action. This evaluation depends on the relations of the body to the rest of the space about it, and is therefore a spatial one. It depends on an accurate evaluation of the body scheme; on an evaluation of the objective and the motion formula or melody; and also on the proper innervation. The importance of this motion formula is that when we come to deal with inhibitions of voluntary motion, we cannot depend on the latter as being merely an automatic unfolding of habitually recorded engrams.

Every voluntary motion is a unit; but it has a psychic portion, made up of all the above mentioned components, aided by their *meaning* and utility function. In the first few years of life these voluntary motions become automatized. Originally the motions were probably intrinsically pleasure giving, without meaning or use. Then voluntary motion became subject to more and more remote objectives. The interest which an activity serves is derived partly from the ultimate goal for which it is carried out, and partly from the activity itself, which has a certain narcissistic value. Moreover, without the idea of successful completion of the act it would be impossible to carry out any voluntary motion. The idea of success may be deferred, as in learning to play the piano. Voluntary motion may, therefore, be inhibited when the purely psychic portions of it have been injured. This fact is of prime importance in appreciating the inhibitions of the traumatic neurotic. It shows itself characteristically in the dreams where a given action is initiated but never carried through, being interrupted by catastrophe. The idea of successful completion has in these cases suffered a severe blow.

This sketch of action integrations deals only with those that terminate in some successful forms. How many difficulties are en-

countered in establishing them and how many types of failure there are cannot yet be determined. No instrument of research is delicate enough to follow them. But certain types of failure can be recognized, which take the form of persistent destructiveness (see pp. 123-129).

This point can be used to illustrate the operational differences between the concept *destructiveness* from the point of view of the instinct theory, and from that of ego psychology. In the first case the phenomenon must be interpreted as a regression to a stage of development in which destructiveness was a type of effective adaptation. Descriptively this cannot be called incorrect. However, the assumption is unwarranted that the infant's intention is destructive or cruel. The technique of mastery is then very crude, and has nothing to do with destruction as it is later understood. From the point of view of the integration of action syndromes, the appearance of *destructiveness*, whether it is called regressive or not, points in another direction. It means that something has happened to the refined forms of mastery, that they are blocked or destroyed by factors that can be identified. The concept "regression" does not indicate where these factors lie, nor does it furnish clues to the therapist to aid the patient to identify and control the disturbing factors. From the point of view of the integration of the action syndrome more differential elements can be identified: the constant presence of anxiety can be demonstrated; the inhibitory effect of the anxiety; the general disorganizing effect of the inhibition both from the point of view of frustration of the goal of the activity, and the necessity to accommodate to the objects in the outer world by some other techniques. The destructiveness is the *result* of all these intermediary steps, which are not included in the concept *regression*.

THE INTERNAL ENVIRONMENT AND ITS RÔLE IN ACTIVITY

The internal environment leads a more or less autonomous existence, being regulated by an independent nervous system, which has, however, definite connections with the skeletal nervous system and definite central connections. Most nerve fibres of this system have no myelin sheath and are, therefore, capable of fewer vicissitudes after birth than are those of the voluntary nervous system. The functions

of metabolism, digestion, respiration, circulation, secretion and endocrine flow are more or less complete at birth, though not stabilized, and ordinarily little subject to the control of the will. The autonomic nervous system is, nevertheless, keenly in touch with the outer world through the intermediary agency of the skeletal nervous system, sensory and perceptive apparatus.

The chief function of the autonomic system is to regulate all internal organs so that they maintain a constant relationship to each other and a state of equilibrium in the organism as a whole [Müller (67)]. It coöperates with the endocrine system by means of hormonal action. It is as wrong to assume that this internal harmony is maintained solely to create the preliminary conditions for an adequate relation with the outer world as to assume that the reverse is true. Both seem simultaneously true.

The functions of the autonomic nervous system and internal secretory glands are related to the maintenance of an optimal balance between the external and internal environments by regulating the distribution of tissue fluids from the splanchnic to peripheral areas. In this function the peripheral system not only gives the requisite signals, but has the undoubted leadership. The autonomic system and its associate, the endocrine, also has certain long-term functions to perform which govern the internal harmony with relation to the gross biological changes in the whole life trajectory of the organism. We gather from the data of endocrinology that it has much to do with the regulation of growth, maturation of the internal sexual apparatus, and the functions of ovulation, menstruation, gestation, labor, involution and senescence. In connection with the "instinct" life of the individual these systems, autonomic and internal secretory, have a host of functions whose economy and modes of operation are as yet poorly understood. Neither do we know accurately the nature of the interaction of the various parts of these systems to each other or the stimuli to which they respond. From our present state of knowledge we cannot tell whether or not the long-term functions of these systems are subject to influence by direct factors or unconscious emotional processes.

The internal environment has its own defensive weapons of a

chemical and biological nature in the blood and lymphatic systems, which behave like liquid organs. In relation to the external environment, under the regulation of the autonomic system, the blood and lymph have an amoeboid character; they have powers of expanding and contracting back toward the splanchnic area.

In comparison with the relations of the infant to the external environment, its relations to the internal remain formally quite constant throughout life. But when we consider the poverty of adaptations that the infant has to the outer world, it is not a far-fetched inference that the sensations coming from the internal environment have a much greater significance for the infant than they have for the adult. We have, however, no way of learning directly how these sensations are reported to the infant or the meaning they have. Our methods of studying this are entirely indirect. We can only draw certain inferences about this phase of infant life from the study of regressive phenomena, and even then we are not absolutely certain.

The inner world can only be known through such of its activities, and the sensations that accompany them, as are capable of being projected on the body surface. From conversion hysteria, hypochondria and schizophrenia we gather that the relation of the internal environment to the emotional life is more intimate in infancy than at any other time of life.

Much of the internal environment is, however, mute. Its functions are not, except in the case of gross anatomical interference, associated with sensation, and even then can give rise only to referred pain. This is undoubtedly true of the large glandular organs—the liver, pancreas, spleen and kidneys. Sensations arising from these latter organs can, however, always be referred to that great functional unit, “the insides.”

The functions of the autonomic nervous system in dealing with dangers arising from within and external dangers, have been exhaustively described in the literature. All varieties of connection have been shown to exist between this system and the phenomena of anxiety and fear; even the old James-Lange theory has found a place for application. The connections between the vasovegetative system

and sexual excitement and orgasmic experience have been followed out. But least noted of all is the most elementary function of the vasovegetative system, namely, that it alone supplies and regulates the conditions for increased motor activity, be it for work, danger, pleasure or flight. Freud and W. Reich (75) have long held the view that "libido stasis" in the form of inadequate gratification can lead to the genesis of a large amount of "free floating" anxiety. Also reserved as a possibility must be that increased activity of the vasovegetative system can be the result of blocking of the normal channels of motor activity, this overactivity of the autonomic system not necessarily being associated, in this latter case, with anxiety. It may be associated with another quality of emotional tone, irritability.

Another view of the rôle of the autonomic system (sympathetic-parasympathetic) is held by Tarachow-Bieber.² These authors hold that the activities of the system are not necessarily evidence of stasis phenomena, but that they are an integral part of the action complex.

Recently important work by Alexander (3, 4) and associates, French (29), Dunbar (17), and others, has proceeded along lines that promise much light on the relation of the autonomic system in activities which are under social control or the internalized representative, the superego (see p. 190). An important orientation point is the normal and perverse autonomic accompaniments of anxiety.

THE EFFECTIVE EGO AND FAILURE REACTIONS

Our purpose in outlining the various steps in the development of the ego was to demonstrate its integrative character. For this purpose we did not find the concept of "instinct" very helpful, because irrespective of whether or not the concept instinct is best able to convey the idea of elementary drive, it is in no way able to convey the idea of successive integrations welded into the actual units used by the individual. We have indicated in a general way the dominant rôle of success and failure in the creation of these units and that the inherent quality of these integrations is colored by the special bias given in favor of one or another of the components. Whatever their com-

² Personal communication.

position, however, to be maintained such integrations must stand in the service of effectual mastery. They serve one of two ends: 1) utility, or 2) pleasure.

The utility function of a series of coördinated psychomotor combinations does not of itself draw any such large quantum of gratification as is absorbed by the objective or end result for which the activity is instituted. However, when the executive apparatus becomes disabled in some way, not only is the objective spoiled and its gratification diminished, but the executive apparatus itself becomes an object of attention and concern.

In the phenomenon of depersonalization we deal with a new factor. To these subjects the world appears strange, uncanny, dream-like, either large or small. Perceptions seem remote; tactile sense is blunted. These patients do not complain of any change in perception, but the ideas conveyed by them are altered. Moreover, body feeling is altered, the subjects appearing strange to themselves and feeling like automata, with marked changes in affects. This process can be descriptively represented as a "withdrawal of libido" from experiences in the body ego and the outer world. Schilder (84) sees two opposing tendencies in this phenomenon: The individual wishes to retain the integrity of his experiences, and not to "withdraw his cathexes" from the outer world; on the other hand, he wishes to withdraw cathexes from the outer world and from the intrapsychic experiences by which they are represented. The symptom is, therefore, a compromise, quantitatively like the world destruction fantasy of schizophrenia. However, the ego is still intact enough to maintain itself apart from the outer world, processes within the ego remaining still separated from changes in the outer world.

The effective ego has acquired techniques which the infantile ego at birth did not have. Grossly classified, these functions are perception (including *meaning* and *use*), voluntary motion, orientation, memory, inhibition and repression. In the functional combinations in which they are integrated for the practical task of living, these adaptive weapons create for the individual a means of security. During the process we call growth and development, the character of the outer world and the adaptive mechanisms are constantly undergoing change.

If the transitions are gradual, little anxiety is created; if sudden, shock reactions are most likely to appear.

The particular form which these shock reactions take is of prime interest to us. We have already concluded that they take the form of inhibition of either 1) *individual sensory motor organs*, 2) *specific completed functions*, or 3) compromises between inhibition and activity—what may be called *partial inhibitions*.

This latter conclusion we can permit ourselves from the overwhelming evidence from hysteria (hysterical blindness), traumatic neurosis, and epilepsy. This is the method the ego has of freeing itself from the outer world. When a traumatic experience pierces the protective mechanisms, the world thus ceasing to be a source of gratification, the ego has at its disposal no path to free itself from the hurtful influence other than along those same channels and means through the agency of which these mechanisms were originally established. The ego cannot "repress" the outer world or the demands of the organism, but it can contract itself, shrink and withdraw. Repression is a technique effective almost exclusively on ideas, impulses and affects with abundant ideational representability. This shrinkage can take place partially at single organs or sites, or totally, with periodic extinction of consciousness. The most universal manifestation of this type of defense against the insurgency of the outer world lies in the banality that we go to sleep when we are tired. We thus inhibit most of the adaptive mechanisms in the sensory-motor and perceptive apparatus, withdraw them temporarily, and lose consciousness.

This gives us our first clue. We might examine these two phenomena of fatigue (6) and sleep as evidence of ordered retreat from a situation in which the effectiveness of the ego has become reduced. In surveying the phenomenon of fatigue it must be noted that it is a slow reaction to a persistent encroachment on the resources of the organism. Recuperation is possible with rest or sleep; nothing is permanently injured.

We have intimated that energy connected with the sensory-motor-apperceptive-secretory system has as an integral part those organized portions of the body known as *organs*. Their functioning is influenced not only by conditions in the external world that engage their ac-

tivity, but also by certain autochthonous conditions resident in the organs themselves. These conditions are generally known chiefly as physiological. But since we do not work with physiological assumptions of the organ as a datum, and all that it does is to function, we must assume that these physiological conditions have certain relations to the personality as a whole and to the problems of adaptation.

The activity of these organs, even according to physiological standards, has certain normal oscillations which are of two kinds: long term, maintaining for the entire life trajectory of the individual; and short term, or diurnal fluctuations. The long term oscillations are those that maintain for growth of the infant into adulthood (maturation), senility, and death. The short term oscillations are of greater interest to us.

A clinical fact is that the infant differentiates itself from the adult in two important respects experimentally verifiable. First, fatigue is much more rapidly induced in the infant than in the adult; second, the child's need for sleep is infinitely greater. These two facts are intimately related. He needs twenty hours a day of sleep; his muscles go into a tetanic state with many fewer stimuli per minute. States of disorganization are, therefore, very easily produced. This is why the child is, in comparison with the adult, more irritable and more spasmophilic. The degree of irritability, closely related to fright, is thus an index of the degree of effective adaptation.

The two phenomena that interest us most from the point of view of "normal" disorganization states are fatigue and sleep. States of disorganization can be produced by external traumatic conditions and by autochthonous factors; in both the internal "physiological" conditions for effective mastery are temporarily destroyed. We must, therefore, be prepared to see a reciprocity of the most intimate kind between the external environment and the internal conditions that govern the tools of mastery. The external world can remain too persistently traumatic, or the effective adaptations may be disrupted by internal conditions. In either case we may expect to see phenomena of disorganization.

In the phenomena of fatigue and sleep we see such normal disorganized states, in which the conditions of mastery are temporarily

destroyed. We cannot enter into the many physiological conditions that govern these two types of reaction. We realize that there is a sleep center, and that metabolic changes in the organism as a whole have much to do with the induction of these two states. These neurological and physiological conditions do not, however, explain the entire phenomenon, since it is commonplace that both states can be induced by purely psychic conditions without the existence of either toxic or metabolic influences.

Even from the point of view of the physiologist, fatigue is the signal of an encroachment upon the reserves of the organism. Owing to conditions governing the internal environment the energy tone cannot be constantly maintained on the same level; the physiological basis of the energy must be periodically renewed by anabolic measures. Fatigue is thus a phenomenon not unlike pain in its function, in that it initiates a series of withdrawal and inhibitory phenomena which result in a cessation of the excessive drainage of energy.

In the normal individual fatigue has a normal curve of development and a direct relationship to diurnal expenditure of energy, *i.e.*, it is proportional to effort. It reaches its height toward evening and is subjectively not necessarily unpleasant. It is more likely to arise sooner in connection with efforts that are vain and purposeless and unsuccessful than with directed, interested, and successful effort. Ineffectual work, stereotypy of attention or effort, too little activity or too much, not enough motility or too much—all cause fatigue. It is a reaction to ceaseless activity and immobility, too many impressions and too few. The absence of fatigue in anchorites, catatonia, catalepsy and hysterical posture and contractures, represent thus a splitting of these processes from the ego as a whole.

Whatever be the physiological correlates of fatigue, there is no doubt of its being a reaction of the total organism. All its psychic accompaniments indicate a disturbance of the optimal balance between outer world and ego, with a desire to have done with the outer world. The psychic symptoms of fatigue are loss of vividness of sensory impressions, loss of mental tonus and intellectual grasp, tendency to perseveration, and explosive affective or muscular response. In the fatigued state there is both an effort to preserve the

normal balance between outer world and ego and the desire to flee it. The wish to withdraw results in an overstimulation in order to preserve the contact. The boundaries between outer world and ego become less distinct, and in exhausted states the outer world becomes completely obliterated. There is also a relaxation of normal inhibitory influences; tired children are irritable, have tantrums, are refractory and indifferent to punishment.

In certain pathological conditions, like neurasthenia, the subjective sensation of fatigue is very prominent. These are exaggerations of the normal fatigue reaction. Most authors agree on the two salient characteristics of neurasthenic fatigue, irritability and weakness. It is noteworthy that in neurasthenia the course of diurnal efficiency is reversed. The efficiency curve and the libido curve coincide, whereas in the normal individual they alternate. The neurasthenic awakens exhausted and is at the height of his efficiency when he retires; work produces efficiency and strength and rest produces fatigue.

The metabolic basis of fatigue need not concern us. This must be separated from the centripetal psychic reaction that it initiates, whose purpose is primarily protective. Fatigue may be characterized as a state of cramp-like inhibition associated with overstimulation. The inhibitory influences are combated by the increased effort demanded. The disagreeable sensation associated with fatigue is undoubtedly the result of the pull and tug of these two opposing tendencies, which also partly account for its ego-alien character. We cannot enter here into a discussion of the entire psychology of neurasthenia. Several things are, however, to be said with certainty about it. Fatigue is actually created by increased effort. This increase in effort is, however, due to a greatly diminished interest, which in turn is due to fears of failure. The increased effort represents thus the need to overcome a strong tendency to retreat from the world.

The twofold character of the struggle to fix attention on the outer world and to withdraw from it sometimes takes on a compulsive and distressing character. One patient thus had a symptom that could be characterized as a form of *sticky distractibility*. His attention would become arrested fortuitously by some object in the environment and here it would remain, stuck in an obsessive and painful manner. His

thoughts would range in a shallow and formal manner about the object without being able to proceed with natural spontaneity to the next. He would look at a chair, be distracted by the fabric, wonder where it came from, was it made of cotton or wool, how do they shear the lambs, how is the wool dyed, how do they cut the wood from the tree, how its it sawed, what do they do with the sawdust, and so on. It is quite evident that the object had lost all significance to him; but his obsession represents a futile and frantic effort to endow the object with some significance. This type of thinking usually terminated in an outburst of anger, and finally in a manic psychosis.

From the purposive point of view the fatigue of the neurasthenic has as much justification as anxiety in the phobia. In the latter case the anxiety is displaced, but its character, source, and connotation justify the emotion. The fatigue in the neurasthenic is justified in the same manner; it is proportional to the effort demanded of him to overcome the pull of his unconscious desire to have done with the world. To maintain even a tangential contact with the world under these conditions demands a greater expenditure of energy. The irritability of the neurasthenic is an indication of the state of disorganization; it takes less stimulus to overstep the diminished limits of his adaptations. In his sleep the neurasthenic continues his ambivalent state to the world. His dreams are repetitive; he never gets through with any action. Moreover, their tempo is retarded. One patient had typical dreams when he retired in a very fatigued state: the time it took to consummate any given action was much prolonged, and he was constantly being frustrated. Another, when she had a slight temperature, which is also a state of diminished capacity to combat the world, dreamed of actions not completed, and of being subject to endless frustrations.

Fatigue, therefore, represents a state of disorganization which initiates a series of protective inhibitions and a process of "narcissistic" withdrawal from the world. The irritability and irascibility associated with fatigue likewise are indications that the adaptive mechanisms are disrupted.

The relation of sleep to fatigue is much too complicated for us to follow out exhaustively here; only a few features must be touched upon. Under normal conditions sleep is an inhibitory phenomenon.

The conditioned reflexologists have effectively proven this. We might say that sleep is one of the outcomes of the protective and inhibitory processes initiated by fatigue.³

The most obvious thing about sleep is that adaptive contacts with the outer world cease, and that all processes—sensory, coördinative and motor—are temporarily in abeyance. There is a marked drop in muscle tonus, which can be used as an indicator that the whole attitude of preparedness for action is reduced.

The conditions of sleep are: fatigue, the shutting out of all stimuli in the outer world, and an inhibition of all functions that effect these contacts. Fatigue is not a *sine qua non* of sleep; excessive fatigue often prevents sleep. The desire to sleep is generally recognized as an important psychic condition thereof. That sleep is a protective and inhibitory phenomenon can be proven by withholding sleep from animals; the younger they are the sooner they die. In the preparation for sleep visual sensations are completely shut out, olfactory sensibility diminished; tactile sensibility reduced to a minimum; the subject takes a horizontal position with complete relaxation of muscle tonus. Though auditory stimuli cannot be entirely shut out, habitual sounds are ignored; unusual sounds, however, preserve their sleep disturbing properties. The susceptibility to sound is nevertheless much diminished. Among the internal processes worth noting are the changes in metabolism and heat regulation. Also interesting to note is the return of the Babinski reflex during sleep, which Ferenczi describes as symptomatic of the failure of inhibitory influence of the cortex and a return of the "spinal soul."

Sleep as an inhibitory phenomenon is best described by the condi-

³ Hibernation (*rr*) is another of these contractile reactions. According to Leo Adler, hibernation is a protective device against threatening conditions in the environment. This reaction is undoubtedly a perversion of ordinary sleep. The hostile conditions which provoke it are cold and diminished food supply. It is a reaction found only in mammals; there is no hibernation in fish, amphibia, reptiles and birds, although equivalents of it occur. In these latter groups various types of lethargic states have been observed, as well as states of "suspended animation," but their origin and functions are not understood. In hibernating animals there is a fall in body temperature, and an almost complete cessation of metabolic processes. There is no intake of food and no voiding of urine. Most hibernating animals hide in protected places; many of those who fail to do so die in the hibernating state. When aroused, the temperature rises rapidly; the thyroid gland, which has in the lethargic state undergone some involutional changes, becomes much more active.

tioned reflexologists (46). Pawlow originally made the relationship still more striking in his formulation: "... that sleep and internal inhibition are one and the same thing. Inhibition is a localized sleep and sleep, a generalized inhibition. Every lasting stimulus which strikes the cortex and which is not accompanied by or interfered with by other stimuli, leads to sleepiness and sleep." Sleep thus takes on the character of a conditioned reflex. Those dogs are most susceptible to sleep who are most active and agile and cannot remain exposed to the same conditions for long without falling asleep. This latter is a most interesting fact and makes us suspect that sleep is in some way a disposition of the energy that is prevented normal outlet in activity.

The explanations about sleep vary according to the system of operational concepts used. If the concept of libido is used, one can say that sleep is a withdrawal of libido from the outer world. This explanation takes no account, however, of the organs or adaptation systems by means of which contact with the outer world is established. It "explains" only the content and ignores the form, and for our purposes the latter is more important. Nor is it of any great help to think that sleep is a narcissistic process which *reproduces* the intra-uterine state.

Our interest in the phenomena of fatigue and sleep is that they are normal states of disorganization and restitution, and may be of help in establishing the crucial phenomena of the traumatic neurosis. The two types of phenomena are not merely analogous, but are similar processes with marked quantitative differences. In fatigue the individual knows that the break in his adaptation is purely temporary, knows how to restore his resources; and in rest or sleep he neither abandons his interests in the outer world, nor really severs his connection with it, even when the functions through whose agency he contacts with it are inhibited. It is this divergence which accounts for the difference in phenomenology. The internal unconscious conception that the individual has of his own resources remains intact, hence the conception of the outer world is not permanently altered. The dreams of the fatigued individual describe how this relationship to the outer world is changed. An activity is initiated which the dreamer would rather not consummate; but the objective keeps obtruding itself on the dreamer, though the means for carrying it through is

blocked. It is quite different from the dream of the thirsty man who drinks enormous quantities of water in a hallucinatory manner to quench the thirst and remain asleep. The inner tension which we call thirst may not be satisfied thus, and the sleep is interrupted. The fatigued dreamer is saying, "I cannot do this," as if thereby to defer the action. Instead the result is a frustration of the activity in question with corresponding anxiety. The dreamer usually awakens from the dream, and the recuperative rôle of sleep is thus miscarried. Incapacity to carry out action must always be regarded by the ego as a danger.

The phenomena of fatigue and sleep give us our first definite clue about what is occurring in the traumatic neurosis. One could even venture to say that if the energy demands made upon the individual in the traumatic event were dissipated over a much longer period of time, the result would be *extreme fatigue* and not a traumatic neurosis. The difference between the two is largely quantitative. The qualitative difference lies in the fact that events occur in the traumatic neuroses which do not in fatigue. Recuperative measures do not have the same effect in the traumatic neurosis as in fatigue. The reason is that a protective and permanent inhibition has taken place, effecting two ends: It has permanently altered the resources of the subject, as a result of which the outer world has become permanently changed into a more dangerous place.

SUMMARY AND CONCLUSIONS

Since the argument up to this point has been rather intricate, with many digressions, a summary would help as an introduction to our final conclusions and to a consideration of the dynamics of the traumatic neuroses.

We began by stating that the concept instinct as an operational tool was useless in dealing with modalities of activity which can only be analyzed by a morphological and not with a conative or qualitative concept. If we grant that activity is propelled by a somatically rooted drive, we cannot follow disturbances in activity integrations by defining either their quality or their objective, self preservation. The drive manifests itself in highly differentiated activities whose history we must trace. Therefore we elected the *action syndrome* as our

basic unit, in order to define precisely the techniques of adaptation to the external environment, from orientation to the most complicated feats of dexterity and inventiveness.

On close inspection these techniques turn out to be collections of coördinated action syndromes. They are not inborn; they are not elaborations of reflexes; they are not homogeneous. They are learned and complex, and in man, capable of refinement to a degree unique in nature. Some of the reasons for man's plasticity and versatility can be identified. It is due to the fact that these action syndromes are *not* phylogenetically predetermined, but are developed in conjunction with experience, due to incomplete myelination at birth, a process not complete until the third year or even later. At birth the capacity for adaptation to the outer world is zero without maternal aid. Internal automatic functions are relatively complete and subject to some change (fetal involutions) and stabilization after birth; but to the outer world a few reflexes, the most important being sucking, and some disorganized "discharge" phenomena on tension, pain or fright. Integrative processes begin at the mouth, but even there failure reactions can be definitely identified. These integrations are followed out at eye, ear, mouth and hand. Fusion of optical, kinesthetic and mnemonic elements of pleasant experience can thus be integrated and become habitual or automatized. Failures cannot be so integrated. Motility adds a new and complicating elements which alters the whole external world. The phase of oral mastery yields to manipulation which gradually becomes organized into purposeful activity, according as the utility value of the object is appreciated. The process of delimiting the ego from the rest of the world was described. The rôle of the intelligence as master coördinating apparatus was discussed, as well as the rôle of imitation and identification.

The internal environment—the system of organs and systems regulating the internal balance—is related to the activity in the outer world because the conditions for effective functioning are governed by it. The sympathetic and parasympathetic systems are synchronous in function with those of the skeletal system. Since the conditions for action vary, the autonomic system regulates the internal environment so as to be consonant with these conditions by distributing tissue fluids, internal secretions and regulating blood pressure and heart rate.

These internal activities thus become an integral part of the action syndrome. The internal environment is not, however, subject to the same control, inhibition, as voluntary activity. Inhibitions in the latter system can, therefore, create disturbances in the activities governed by the autonomic system. These can be regarded from several points of view as "stasis" phenomena, as partial activities, etc. The relation between autonomic disturbances and their secondary organic sequelae, become important orientation points [Alexander (3, 4), Dunbar (17), French (29)]. The normal physiological accompaniments of anxiety offer a basis of comparison of various types of autonomic disturbances.

The effective ego has, therefore, the following functions: It can perceive objects in the outer world, interpret them for the special ends of utility or pleasure, apperception, motility and manipulation capable of infinite development, orientation, memory, and inhibition (also repression). In the effective ego these perceptual coördinate and executive functions are freely mobile, easily accessible for use. There is one exception, and that is fatigue. This phenomenon is worth studying because it shows us the consequences of slow, gradual encroachments on the executive resources of the ego. It is a "normal" phenomenon in which the internal structure and coördination of ego functions is only temporarily disorganized and can be completely restored by rest or sleep. It is a phenomenon with physiological accompaniments. Psychologically speaking it is a tension state which registers the discrepancy between available resources and the demands on the organism. The symptoms of this state are diminution in accuracy of perceptions, irritability, tendency to outbursts of rage, wish to have done with the outer world and to retreat from it temporarily, without, however, severing the ties to the outer world permanently. The recuperative agent is sleep, a controlled and elastic inhibitory process.

The reaction to fatigue is not an analogy with the traumatic neurosis, but a replica, in that the same aspects of the ego are involved, and a similar picture of the sequelae of the process of disorganization takes place. There are, however, many differences.

Many of the details of this sketch of development may be incorrect, inaccurate, or incomplete; but there can be little doubt about the

allocation of the aspect of adaptation involved in the traumatic neurosis. There are still, however, some questions about it that we must answer. 1) What are the concomitants of this development in the remaining aspects of the personality, and what are their mutual interconnections? 2) What opportunities are there for arrests of development and what are their manifestations? These questions we must answer in order to come to some conclusions about the relation of the traumatic neurosis to the personality as a whole, and what is the relation of the trauma to the pre-traumatic personality, or the predisposition to the neurosis.

The development we have outlined was described as if it were completely unrelated to the personality as a whole. This impression is naturally an artifact of presentation. The development of the body ego and its functions is an integral part of the development of the personality as a whole, and was isolated temporarily to study its minutiae. This entire development is associated with the relations to the parent, to the culture which regulates the social control of impulses, and furnishes the limits of this development as well as some particular techniques which are there in vogue.

From the very first experiences at the breast, the infant can have severe frustrations, and at this time the utility value of the mouth as a feeding executive, and the pleasure value of sucking are intimately fused. These two functions of the mouth, the utility and pleasure value, mutually influence each other. If the pleasure value of the mouth is predominant it is likely to lead to strong attachment to the mother, which is likely to exert a retarding influence on the development of adaptation to the outer world. Disappointments in these encounters with the outer world are likely to increase not only the pleasure value of the mouth but the *ego attitude* of dependency, an attitude which strongly influences the reactions to disciplines later instituted. This in turn diminishes the self confidence of the individual and lessens his enterprise.

The process of weaning and the induction of sphincter control are likely to act as stimulating and retarding influences; in fact any situation that compels the child to alter established adaptations is likely to meet with protest. On the other hand new contacts afford new

gratifications if they are successful. The character and time of induction of the weaning are likely to have a marked influence on the building of action syndromes, especially the rapidity with which they develop. The induction of sphincter control, weaning, and beginning of locomotion all take place within close proximity, and a more concentrated collection of new experiences never occurs again in the whole life cycle of the individual. In connection with this development many things occur which are still very obscure. Children whose encounters with the outer world are filled with frustrations are likely to resent these changes, to which they are propelled both by growth and the demands of the social environment (parent). This attitude of resentment yields to social control with development of special attitudes to both the activity and the disciplinarian.

Of particular interest in connection with ego development is the precocity of sexual activity of the child. This relationship is, however, still very obscure. It is possible that the pleasure function of the sexual activity acts as a releaser of tensions created by encounters with the outer world. In this case the social control of masturbation in childhood both by direct and implied methods has a retarding influence.

In addition to the rôle of imitation and identification there is the important factor of direct parental aid in development. Left to its own resources it follows that the child will be subject to innumerable disappointments and shocks. If the child can be spared many of these by anticipation or by immediate help inhibitions and their sequelae can be prevented. This has been proven on identical twins by McGraw (63), where one child was given great assistance in the development of activities, and the other neglected. The former developed with great rapidity; the neglected one was very far behind. Furthermore the relation of this development to other social situations as rivalry and competition, etc., is a long and intricate subject [Murphy (68), Levy (56, 57)].

No individual can be studied with any care without revealing a series of characteristics which bear the imprint of minor inhibitions—like distaste for sports—which are part of his individuality. Such inhibitions, usually disguised as distaste, lack of interest, or per-

sonal idiosyncrasy, can exist without impairing the general effectiveness of the individual. But they all have the structure of minor traumatic neuroses. The reverse is also true; the history of special aptitudes and dexterities follows the lines of integration in the line of successes, with increased meaning accruing with each success. The ultimate result is the expression of skill, and the techniques in the manual arts. There can be little doubt that in the skills of the graphic arts there is a body ego component in the fact of greater meaning of form and color. The concept "sublimation" only explains the qualitative element.

Another important connection that body ego development has to the personality as a whole has already been explored in the study of hysteria. Here, as Freud (38) pointed out, the utility function of the organ or limb, yields to its erotic significance. Inhibitions of this kind are not, however, of the kind we encountered in the traumatic neurosis. They proceed from a significance of the organ to those factors in development which are socially governed directly, or through its internalized representative, the superego.

Furthermore gross inhibitions of all action syndromes effective in work can occur, for reasons that have nothing to do with the development of the actual ego functions. Thus one patient had a work inhibition which showed itself in a complete inefficiency when he attempted work and great anxiety in anticipation of failure. The crucial constellations in this neurosis were not based on failures in development of action systems, but in the uses to which they were to be put. He never took a responsibility for himself in his entire life. His relations to others were predicated by the assumption that his helplessness was a claim for help, and that he had the same claim on everyone that he originally had on his parents. This is an instance of inhibitions of ego functions based on a persistence of infantile relation to others. His neurosis, however, had no resemblance to a traumatic neurosis. It was not a body ego problem; this was intact. But the uses in which his action syndromes could be effective were strongly under the influence of childish attitudes in his relation with other individuals.

In short the body ego development has many connections with the other aspects of the personality. The utility function of organs and action systems do not fall under superego supervision, that is, social

control of impulses and their internalization. The only aspect that falls under social control is the use or disposition of these body ego functions, the most notable of which is aggression to others. They develop under the limits permitted by external reality, and the actual capacities of the body ego and intelligence. Furthermore this development always takes place in a cultural mould, and is predicated by the patterns extant in the specific culture, apart from the general function of orientation, manipulation, and motility. The turbine was not invented by a native of the Marquesas Islands.

A second question is whether the development of the body-ego is subject to the vicissitudes of *fixation, repression, regression, return of the repressed*, and if so what are its manifestations? This is another way of stating the problem of the predisposition to the neurosis. To start with these criteria mentioned apply to the conception of neurosis couched in the terms of instinct and are not adapted to a morphological operational concept.

Arrests in the development of the body-ego functions do take place. They are not, however, likely to be noticed because in most instances failures can be compensated for by abandoning the failure and pursuing success. Except for the basic functions of orientation and locomotion, there is a wide range of choice. This circumstance can lead only to the development of one aptitude as against another. This is not similar to displacement or regression.

The only kind of arrest of development which is likely to be noticed is one that is *general* and involves the most elementary forms of adaptation, and even there this development is likely to be *retarded* or *incomplete*. We do not yet have any reliable criteria for detecting these arrests. In the sexual domain the arrest of development takes place largely as the result of social control of impulses. Such social control is not exercised in the intrinsic development of the body-ego; on the contrary the development is encouraged to a greater or lesser degree, though it is channelized into socially approved directions.

Retarding influences can come from general organic defects like those leading to mental deficiency. This is not of great importance. The only other detectable influence is a trait for which no name yet exists, but which can be described as *incomplete mastery*. The mani-

festations of this kind of arrest were described in the case on p. 190. The arrest showed itself in slow and inadequate mastery. This child was constantly falling down, never ceased the activities of *destructiveness*, like boring holes, tearing and breaking her toys. Eventually she became an epileptic. But these destructive traits showed themselves in her from the third year onward. Following the later traumatic experience, there were regressions to activities and play abandoned seven years previously. In the traumatic neurosis adaptation corresponding to oral mastery and destructiveness have been described. In other cases actual reproduction of adaptations corresponding to the first months and first year of life have been repeatedly noted.

These regressions cannot, however, be harmoniously integrated with the same success as they are in the other neuroses.

The answer to the question of predisposition cannot be completely given now. It is a predisposition not dissimilar to that for epilepsy. If therefore we look for the predisposing factors in the pre-traumatic personality we are not likely to find anything distinctive. Data like those of persistent destructiveness in childhood are not likely to be remembered, and I have never had the opportunity to study the personality of a subject who later developed a traumatic neurosis.

In the actual subjects with traumatic neurosis we find three varieties of personality: 1) those in whom the trauma is woven into the character structure, in which the trauma has the significance of punishment or longing for a protector; 2) those in whom psychoneurotic symptoms and traumatic neurosis coexist, so that if the traumatic neurosis is removed, the other becomes more prominent (p. 19); and 3) those in whom the traumatic neurosis is the exclusive picture (see p. 46). In each of these cases the traumatic neurosis as described is always present. In this volume the third type was the one studied exclusively. The other types still remain to be investigated. This physioneurotic syndrome is present in all cases following traumatic experience, whether the reaction lasts three hours or thirteen years, and irrespective of the pre-existing personality, be it schizophrenic, psychoneurotic of "normal." The differences are to be found in the failure of recuperation, the persistence of the neurosis.

V. PSYCHODYNAMICS

HAVING STUDIED the body ego and its action syndromes we are in a position to track down the changes responsible for the symptoms and other manifestations of the neurosis. For this purpose we can study 1) the differences between inhibited and uninhibited activity; 2) the structure and relations of the action syndrome, or at least identify its constituent elements; 3) We can then identify the elements inhibited; 4) and finally follow out the consequences of this inhibition.

STRUCTURE AND RELATIONS OF THE ACTION SYNDROME

From the study of the transference neurosis we learned that when there are no obstacles between an impulse and its execution, the activity leads to release of tension, gratification or pleasure. When the impulse arises again, there is an anticipation of gratification, a mobilization of executive functions, and their psychic counterparts or memory pictures. There is formed, as a result of such successes, a picture of oneself as consummating the activity. This is positively toned affectively and gives rise to the attitude commonly known as self-confidence, and is expressed in the formula, "I can do that." This leads to a confident, friendly and eager attitude to the impulse when it arises again and to pleasant anticipations. It is represented in word, idea, and motility constellations which are easily accessible, plastic, and mobile.

When the element of *pain* in the form of anxiety is introduced into activity by social control, the parent, through threats of punishment or loss of protection, conditions are created which favor the abandonment of the pleasurable activity as an escape from the situation and to preserve the dominant interest. Should such an impulse arise again, instead of a friendly attitude, there is one of anxiety, which is the anticipation of danger. In fact, anxiety may appear instead of the impulse after the latter has been repressed. Instead of an attitude of confidence, there is timidity, fear of the forbidding parent, increase

in dependency to him. If the repression is complete, we now have what is called an *inhibition*. Such an inhibition modifies the entire executive apparatus. The perceptions of oneself and of the activity become modified, so that the impulse is represented not in its original and pleasurable form, but by its opposite, cruel and hurtful (masochistic) images. In dreams the individual represents himself as failing in gratifications. This represents a complete change in the organization of the personality.

If the impulse in question is a sexual one, the occurrences following the inhibition are due to the nature of the impulse and of the capacities of the organism to accommodate to this socially imposed control. Since the end desired is a type of sexual pleasure, and the orgasmic experience is the one sought after, two modalities in the organization of the personality are possible in order to achieve that end; there is the active masculine, and passive feminine. In the latter case the end result, the orgasmic experience, may be impaired but it does not always follow. Another factor aids to the possibilities of adjustment to this primary inhibition, namely, the possibility of pressing other zones than the sexual into erotic use, as the mouth, anus, etc. Thus an inhibition established early in life has the possibility of forming a new adjustment by *displacement*, regression, and the reorganization of the personality from an active to a passive modality. This latter process gives rise to what are called masochistic phenomena. Needless to say, sexual tensions cannot always be adequately expressed through this masochistic organization and the orgasmic experience may even fail. On the other hand the orgasmic experience may be adequate, but the relations to the sexual object seriously distorted. The result is neurosis of the transference type. The manifestations of this neurosis are, therefore, predicated by the particular impulse involved, and by the possibilities through changes in organization to bring some equivalent for the normal consummation to pass. In bringing this result about the possibility of *passivity* and of regressive displacement have played a signal rôle.

In the traumatic neurosis we are dealing with modalities of activity in back of which we predicated a drive. We cannot, therefore, identify any specific instincts, nor any instinctual goal; but we do

recognize the goal of mastery. The *activity itself* has a structure we must describe in order to be able to understand what happens when we speak of an *inhibition*.

There are three aspects to the action syndrome, corresponding to receptor, coördinator, and effector apparatus. No schematic representation does justice to the actual events, and our scheme hardly does more than to identify the constituents.

Perception by sense organs and coördination of past experience gives *meaning* to objects in the outer world. The chief of these is utility. The objective is to exploit, avoid, manipulate, use, destroy or render ineffectual, all of which intends to circumvent the peace-disturbing properties of the object. The affective attitude is one of *interest*, which together with other coördinators gives rise to impulse to investigate (curiosity). The actual executive is the motor apparatus, through muscular coördination of memory pictures, visual, kinesthetic, aided by the knowledge of past success. These are freely accessible for use when the proper stimulus arises. Moreover, they are modifiable, leading eventually to *skill*. Together with curiosity this composition makes for inventiveness. Coincident with these motor activities there are a series of autonomic accompaniments, attuned to activity of the executive system, and ready to alter the internal organization in response to need.

The effect of the consummation of this activity is the creation of an attitude of self-confidence, enterprise, expressible in the formula, "I can do that," a feeling of pride, ego enhancement, or merely satisfaction.

The control of this whole action syndrome is vested in the balance between the external reality (reality testing) and the resources of the organism as a whole. The efficacy and smooth operation of the action syndrome is brought into question in fatigue, or when the stimulus is too overwhelming, which disturbs the balance between ego and outer world.

Now we need to study what happens in the acute traumatic event. From the fright reactions of infants we learned that no ego could be formed in an environment that remained persistently traumatic. The work of the reflexologists supports this view. Furthermore, it is high-

ly probable that in infants the perceptive element in the traumatic stimulus is almost completely absent (9). These two facts can be verified in the traumatic neurosis; the ego becomes disorganized, the sensory elements of the trauma are perceived only to a slight degree, and if the stimulus reaches a sufficient degree of intensity, consciousness is lost entirely. It is no exaggeration to say that in this moment when consciousness is lost all organized responses are cut through, and the retreat in the form of ego shrinkage can be so complete that death can and occasionally does result. In addition, an enormous disorganized aggression is released. This means simply that the individual is trying to maintain contact with the outer world without the aid of the organized, integrated, and orderly techniques. It means also that the significance of the outer world must change from a friendly to a hostile place. In the transference and narcissistic neuroses the breaking of organized adaptation is a relatively slow process, where the ego has more or less chance to re-establish new adaptations on another level by means of regression, always a cushion against which the ego can fall. Regression thus prevents the complete overwhelming of the ego.

In the state that follows a severe trauma we may have an actual reproduction of the conditions of infancy. Consciousness is either completely lost, or the sense organs and motor and perceptive apparatus are much diminished in capacity. Only the most primitive vegetative functions remain active. That this is a process of withdrawal and not one of being overwhelmed in a physical sense, is supported by the observation that many such severe states were seen in subjects who only anticipated a trauma that did not actually occur. This type of reaction is entirely centripetal in character. In general, the reaction is like the contraction of the pseudopodia of an amoeba. Since the organism cannot contract, however, it withdraws the adaptive mechanisms, with the result that either individual manipulations fall away or the organs through which they are executed are paralyzed partially or wholly. In fact, in many cases the post-traumatic adaptation cancels out all those integrated activities which took place after birth. In the delirious reactions the ego is fragmented beyond recognition, and all experiential connections which make the world an ordered place are lost.

Following this initial loss of consciousness, which is extremely variable in duration, the state of infantile adaptation is reproduced in some respects. There is hypersensitivity to all stimuli and a persistent effort to keep the outer world away, for its meaning is now lost.

Then follows a period in which readaptation is attempted, and here lies the crux of the traumatic neurosis. In some subjects, for reasons that we shall subsequently discuss, this readaptation takes place normally. This is the period in which all traumatic subjects have nightmares of destruction; but some go on to a complete rehabilitation and others remain stuck in this reduced position (see convalescent dreams on p. 91). In these latter cases the factor that interferes with the rehabilitation is a series of *systematized inhibitions*, entirely unconscious, and more or less uniform in character. This is where the pathogenic factor lies. We have seen that this ability to inhibit unsuccessful modes of adaptation is the one responsible for the very growth of the integrated ego, and here we find it interfering with the entire adaptation of the individual. In the infant who burns himself in the candle flame, in the animal which is disappointed in his conditioned reflex, in the man who falls from a horse and is then afraid to mount any horse—in all these we see the same principle. But in the case of the traumatic neurosis the protective function of inhibition seems to have miscarried; no more so, however, than in the case of the transference neurosis, where when a given impulse is inhibited, it is from that time on lost to the ego as a whole. This same is true of the traumatic neurosis, but in the latter the inhibitions are more costly to maintain, and more damaging to the total adaptation than are the localized inhibitions of hysteria, and the greater opportunities for compensatory devices that exist in the latter.

In the normal process of growth any number of petty traumata are experienced, which induce localized inhibitions and which the individual overcomes by easily available substitutes or alternatives. This choice is not open in the traumatic neurosis, for the trauma in the adult strikes a fixed structure, the usefulness and expediency of which has been demonstrated by many successes in the past. The adult has, therefore, much less plasticity than the growing child. However, a traumatic neurosis in a child has the same arresting effect.

Before we can appreciate the effects of the inhibitions in chronic

cases we must first know what is inhibited. The sense organs generally continue to function, and apparently the pictures of reality they report are formally quite the same as before; they may episodically blurred and confused. But their *meaning* has been modified, because the manipulative or mastery elements are no longer effectual. The objective of action with regard to them is seriously impaired or lost. Hence there is a wish to have done with the outer world, and get away from it. The former interest and curiosity is replaced by an attitude of vigilance, anxiety, and above all irritability.

The effectiveness of the actual motor system is greatly impaired, and in localized places entirely paralyzed. This leads clinically to awkwardness, tremors, vertigo, stumbling, fumbling, etc. The free accessibility of the motor functions is lost. The autonomic system is active, but not in consonance with the demands of reality, the effective motor channels now being blocked in whole or in part.

Thus when an impulse for action arises in this now altered organism instead of eagerness and curiosity, there is irritability and preparedness for flight. The self-confidence is gone, and the individual ultimately gets a permanent picture of himself as helpless. He cannot conjure up the picture of a completed action, and can get no satisfaction from his ineffectual efforts.

THE CONSEQUENCES OF THE INHIBITION

In the transference neurosis we noted that the consequences of inhibition were that an entirely new reorganization of the personality occurred. In these neuroses the process was facilitated by the ability to press other organs or zones into use for the one abandoned, and by alterations of the modality of the entire personality from activity to passivity.

These possibilities are not open in the traumatic neurosis, because of the particular aspects of the ego that happen to be involved. The needs of the organism for contact with the outer world can only be silenced by death, and the insurgency of the outer world continues and can not be done away with. Hence *repression* and substitution are impossible. Regressions can and are instituted; but they are of little avail in maintaining a satisfactory contact with the environment.

In this category are the "oral mastery," which clinically takes the form of destructiveness, and the gross reinstatement of the behavior of infants. No release of tensions can be achieved by these regressive means. No displacement is possible, because the effective ego, and the various components of the action syndrome have fixed functions, intimately tied to the physiological functions of the executive apparatus. Such opportunities for choice as there were in the course of development, have already been exercised, and the organism subjected to the trauma no longer has the opportunity to build new action syndromes. This is especially so since the functions involved are the most elementary. In short no substitution or displacement is possible.

Secondly the modality of *passivity* is likewise untenable in adaptation to the outer world. This is possible in interpersonal relations, to a superior whose favor and protection one wants to preserve. But what is passivity to the outer world? The only recognizable form is *death*; because complete passivity means that the world is permitted to overwhelm the subject. The concept passivity in this connection is incompatible with any effective adaptation. When an impulse is abandoned under the influence of a parental threat (social injunction) and maintained by the internalization of this force, the superego, it must be remembered that the tonicity of this internal force is maintained by the expectation that the rewards for repression can still be realized. In the case of the traumatic neurosis no such relationship between ego and outer world exists as corresponds to the one between parent and child. The contraction of the ego was not here enforced by a social sanction or its later representative, the superego, but by the discrepancy between the forces in the outer world and resources of the ego. This principle has been operating since birth in the individual, and the whole effective ego owes its effectuality to its agency. Since introversion or displacement are impossible, the functions through whose agency effective contact with the outer world is maintained shrink, or contract. They maintain a minimal contact with the world, a contact whose quality is now much altered.

Contraction of the ego, with consequent inhibitions, is a process that can be identified in the executive portions of the action syndrome. By certain sensory coördinative elements, the memories of the event,

are subject to *repression*. There is not only amnesia, but persistent *resistance* to their recall. This is a defense against the renewal of the painful experience, to be sure. It can be definitely shown that (see p. 221) this amnesia is only a symptom of ego contraction and not its cause; for once the inhibitions are lifted and functioning reinstated, the amnesia lifts, as does the resistance. We never hesitate to recall painful experiences if their effects are no longer current.

Once these contractions are established, we can evaluate the remaining phenomena according to the a) changes in effective adaptation, b) changes in the conception of oneself, c) changes in the perception of the outer world, and d) changes in autonomic activities, and other characteristics, such as dream life and outbursts of aggression.

a) The new adjustment is erected on the ruins of what was once a rich reciprocal relation with the outer world. The ego is now smaller, in the case of the sensory motor paralyses, and for all the other types, impoverished. The quality of its contacts with the world are coarser, and the individual is always on the verge of wanting to get away from it.

The most important clinical evidence for the reduced resources is the diminished capacity for work. Effective work means the coöperation between all executive functions and an interest in the world and in the objectives for which the work is done. These executive functions are now disorganized. The motion harmonies lose their accuracy and smoothness. The meaning of the objective is clouded and indistinct. This failure of organized channels of aggression is to be equated with the periodic outbursts of disorganized aggression so characteristic of all these neuroses.

b and c) The endopsychic conception of one's own person has also undergone a marked change, not a feeling of inferiority, at least I have never heard that complaint. But confidence is destroyed, and retreat instead of enterprise becomes the objective. Coincident with this change is the change in the meaning of the outer world. It is now a hostile place, and the subject feels in constant danger of being overwhelmed by it.

It is the change in the conception of oneself and the outer world

that is responsible for the catastrophic dreams. The catastrophic dreams either fail to carry an action through to completion or they end in failure. This means that the ego structure of the individual has been altered, so that the weapons with which to carry the action through are no longer a part of the effective ego. The idea that the world is caving in on the subject is warranted by the fact that those instruments with which the world is kept at bay—all organized aggressive activities—are no longer enjoyed by him. He is not their master, and he no longer enjoys their protection. Hence the endopsychic perception of a hostile world and an impoverished self. An extremely vital point is the significance of the disorganized aggression.

The catastrophic dream is a challenge to the general formula that dreams represent wish fulfillments. This dream contradicts this general idea. I believe that the difficulty lies not so much in that it is a contradiction of the theory but in that this formulation of the dream functions may be at fault. "Wish-fulfillment" is a rather confusing characterization of dream function. If one examines a dream from the point of view of wish fulfillment, one can usually find some *wish*. But most often the manner in which it is handled is more important than the wish itself. If we study the dream of a frigid woman in which she sees herself in bed with her paramour, but her mother comes in with a tray of food, and the patient has the affect in the dream of anger, we have some difficulty locating the wish. One can say the dream satisfies the *wish* for oral satisfaction instead of genital. I do not believe this to be the case. The subject is giving us information primarily about the structure of her personality. It tells us that the sexual wish is interfered with by something which has attributes of mother and of eating. The dream of the traumatic neurotic is no different. It gives us information about the structure of his new personality, established on the ruins of what was once an effectual system. The subject starts many activities but cannot consummate them. This tells us merely that he cannot carry out any activity and the *wish* is not even formulated. The reason for this we know, but our subject does not. How can he carry out any activity if he has lost the instruments with which to do it? Why can't he deny all this with pleasant dreams of effectiveness?

The subject is vaguely aware of his diminished resources, and the discomfort and anxieties are too great to be overcome by fantasy, in the same way that a dream of drinking water most often terminates in waking the sleeper, notwithstanding the intention of the dream to preserve sleep by satisfying the wish for water.

We could say from these catastrophic dreams that the subject now has adopted an extremely *masochistic* attitude to the world; from the outbursts of aggression we might say that the adaptation is extremely *sadistic*. Neither characterization is very informative. He is not seeking gratification of a *sadistic* impulse. *Both phenomena are consequences of the underlying inhibitions*. This is the basic pathology; the rest are efforts at re-establishing a meaningful contact with the outer world.

How does the inhibition explain both the masochistic phenomena and the aggressive? In the first place both these concepts cannot be used in the same way as they were in the transference neuroses according to the libido theory. In this new context this description does not make sense, and it may be that the original theoretical formulations were derived from the difficulties attending the use of *instinct* as an operational concept. The whole situation appears much more clearly and simply in the traumatic neuroses. We started by stating that we had to employ a morphological unit, the *action syndrome*, and not a conative concept like instinct. Therefore instead of asking what *instinct* is involved, we ask what action syndromes or parts of them are involved. From the point of view of instinct, sadism and masochism had to be considered attributes of the *instinct*. This view is being changed. Masochism is a type of ego organization with respect to the use of certain ego resources. The phenomena studied in connection with the sexual impulse do not apply to the body-ego action syndrome. In the first case the masochistic attitude is one maintained to another individual. This can become habitual and so organized that pleasure qualities can not only be attached to masochistic activities but become an indispensable factor—provided the ultimate goal be achieved, or if the expectation of its realization can be maintained. In the case of the action syndrome we predicated a drive. But we were not examining the drive which we could not get hold of; we could only see the

action syndrome. Therefore whatever manifestations followed either highly organized and successful activity, or the products of the breakdown of these action syndromes, we could still predicate that in both cases the drive was the same, and that what was altered was not the drive, but the ego organization. The same view can be used for the sexual masochism as well.

If we attempt to describe the adaptation in the traumatic neurosis, especially the catastrophic dreams or the outbursts of aggression, on the basis that it is a *masochistic* phenomenon, we cannot quarrel with its descriptive value, but it gives no indication of where the trouble lies. The subject does not wish to be overwhelmed by the world—there is no orgasmic anticipation or Nirvana principle in back of this attitude. On the contrary he is trying to establish a meaningful contact with the world that has been ruined by the traumatic experience. By the same token the outbursts of aggression are not merely regressive phenomena; they have the same meaning now that they did in childhood, when they were clearly evidence of disorganized or incomplete forms of *mastery*. It follows that if the need tensions continue—and they will as long as our subject is alive—he will seek satisfaction from the world one way or another. When the organized forms are not available, we find these outbursts of aggression. Hence the question as to whether they are regressive phenomena or disorganized is purely academic. The only difference between infantile aggression and that of the traumatic neurosis is that in the former the child has a sense of accomplishment and triumph. Not so in the latter; there they are paroxysms of frustration and inadequacy. This technique is totally incompatible with his current needs.

Masochistic phenomena in social and sexual adaptation of man are indicators of great changes in organization of the personality. But they are in themselves not incompatible with life, and if started early enough in the life of the individual can even be worked into a form yielding particular gratifications. They are not, of course, in accordance with the general social ideal. Masochistic adaptation to the outer world cannot ever yield any gratifications. The only adaptations that can do so are the secondary uses to which this state of affairs can be put, namely to claim compensation. But this is not a primary gain;

it is a secondary gain. It is the use to which the now reduced status is put. It is moreover a type of adaptation in which direct encounters with the outer world are evaded; it is now established on the same basis as the infant, through the agency of another person or institution—a form of neurotic parasitism.

We can summarize by stating:

The traumatic neurosis has furnished us the first opportunity to test the operational value of the concept "masochism," as it was worked out in hysteria and compulsion neurosis. It is quite evident that the modalities "activity" and "passivity" do not function with equal degrees of success in all aspects of ego organization. For it can be said with certainty that "passivity" in sexual adaptation, be it in male or female, retains a good deal of the same quality as "activity." This is not due to any innate "bisexuality" of man, but to the fact that the pleasure quality of sexual gratification can be achieved through various types of ego organization with perhaps only minor changes. Ego functions other than sexual are capable of no such organizational changes without suffering, at the same time, drastic changes in quality. The reason seems to be that the *gratification* they achieve is not direct, or only to a smaller degree. That is essentially what we mean when we call the function they perform a *utility function* and not a *pleasure function*.

Several points now become clear from these considerations:

1. Masochism represents primarily a state of ego organization in pursuit of a drive, and not the drive or the "instinct" itself. The concept "death instinct" is decidedly misleading in this regard.
2. Ego organization can be so altered by inhibitions as to completely disturb the utility function of certain organs or action systems. And it is this which is responsible for the structure of the catastrophic dream. If we must predicate "drives," then we must conclude that the "drive" remains unchanged. What is altered is the ego organization necessary to execute the "drive." The catastrophic dream, therefore, records an attempt to execute a drive with an ego organization shorn of

its implements. The utility function of this organization is now defective. If we conceive of the effective ego organization as a means of "pushing" the world away, of limiting the character of this contact by manipulation of some kind, then once these functions are impounded, the endopsychic perception is justified that the outer world is overwhelming the subject. This may be diagrammatically represented as follows:

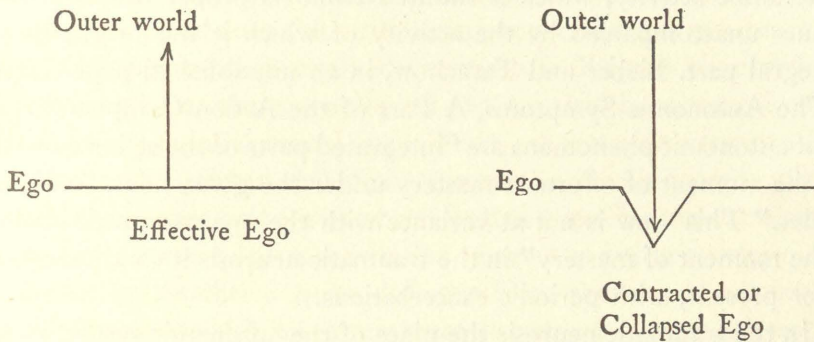


FIGURE 1.

The repetitive character of the phenomena in traumatic neurosis is again a misleading observation. They are indeed repetitive, yet repetition is no active principle. This statement hides the fact that the ego organization has been altered; the patient's now operating within confined limits of his shrunken ego gives the impression of repetitive phenomena. His activities are no more repetitive than are those of a prisoner in a cell which contains nothing but a chair. The character of the traumatic neurosis is no more repetitive than that of the ordinary neurosis—or the normal individual. They look repetitive because on each occasion that a bit of action is initiated, the same blockage is encountered, with the resulting failure.

The last two phases to be considered are the autonomic phenomena and the behavior of these patients to compensation.

The autonomic phenomena need to be explained as regards their rôle in this failure reaction which is the traumatic neurosis. We have seen that at times this autonomic aspect may occupy the entire façade

of the neurosis. These autonomic phenomena may be considered "discharge" manifestations. One may say that the inhibitions above described produce *stasis* phenomena, on the principle that since the demands of the external world continue to be the same as those before the neurosis was established, and the executive apparatus cannot carry out the necessary adaptive manipulations, that *stasis* of some kind will accumulate. In other words it is as if the internal environment were geared for action, and the executive apparatus not. Hence autonomic activity, which is shunted from its proper function, continues unaccompanied by the activity of which it was originally an integral part. Bieber and Tarachow, in an unpublished paper called "The Autonomic Symptoms, A Part of the Action Complex," state that autonomic phenomena are "integrated parts of the action complex at the moment of efforts at mastery under the given neurotic vicissitudes." This view is not at variance with the one proposed, because "the moment of mastery" in the traumatic neurosis is continuous and ever present, with periodic exacerbations.

In the traumatic neurosis the place of the autonomic system in the action syndrome is quite clear. It stands in direct relation to activity which is inhibited and in this neurosis is a part of the disorganization phenomena. The relations of autonomic disturbances in other neuroses are more difficult to disentangle. A rich literature has grown about this aspect of neurosis which promises to be of the greatest significance (Alexander, Dunbar, Felix Deutsch, French, Daniels, Cobb, *et al.*). In this work certain somatic syndromes like gastric ulcer, mucous colitis, asthma, hypertension, are studied as expressions and outcomes of certain emotional conflict situations. Little question can be raised about the phenomenological aspects of this work; this can arise only in the interpretation of the facts, and here the definition of the precise relation of the autonomic disturbance or its secondary sequelæ to the emotional conflicts is not easy.

The patterns recorded are of several varieties; those pertaining to the gastrointestinal tract are such that these organs are pressed into the services of the ego as a whole, by the perversion of some of their known utility functions. These functions are largely devoted to the internal environment and have little (they do have something) to

do with activities to the outer world. Contractive, secretory, retentive, expulsive functions may thus be exaggerated, in order to consummate some unconscious purpose of the ego. A second variety, hypertension, is concerned with inhibited "aggression." A third, asthma, is related to behavior control in connection with sexual and other situations.

In evaluating the observations recorded by these authors it must be borne in mind that the specific conflicts, and the personality pictures can all be found *without the particular somatic accompaniments* of colitis, peptic ulcer, hypertension or asthma. Hence we must answer the question of what are the differences between these two types of cases. This problem is not solved yet, nor is it likely to be solved by merely correlating the psychological picture with the somatic events, though this is an indispensable step. There are some intervening steps that need to be isolated. All these phenomena of colitis, peptic ulcer, asthma and hypertension, and a host of other miscellaneous autonomic disturbances have been noted in the traumatic neurosis, where the nature of the conflict is quite different from those recorded in the character neuroses. There are apparently two separate problems involved: 1) the structure of the specific action syndromes involved and 2) the uses to which this action syndrome is put by the personality as whole. For example: there is a specific somatic picture that accompanies anxiety. In the creation of this picture there is a definite relation between the affect and the *action* to be undertaken for the danger situation. This action may not be possible because the danger stimulus is too great, or the action be inhibited. In either case free access to effective activity is blocked. In some individuals this normal physiological anxiety picture is altered; in fact it may not even be perceived as anxiety; but instead some of the autonomic phenomena be distorted in one direction or another. More precise definition of these relations must wait for a finer appreciation of the relation between anxiety and motor inhibition. Once this particular type of action syndrome is formed, the individual will use it on any occasion of anxiety. This is where the differentiation between the two types of cases seems to lie.

In the case cited by French (*l.c.*) the patient abandons a sexual temptation for fear of losing parental protection if he does so. This

constellation, "if I do this I will be punished," is a persistence of an infantile reaction to discipline. This is not what is related to asthma; this can be found in any hysteria or obsessional neurosis. What is specific about this reaction is that in association with the anxiety a special somatic system governed by the automatic apparatus goes into spasm. This is a specific integration of action syndromes, and is a perversion of the normal anxiety picture. From the traumatic neuroses my feeling would be that this physioneurotic reaction is related more to the *motor inhibitions* than to the *affect*. This is quite obviously the case in hypertension. If we can permit a guess, we might say that in hypertension the spasm involves the renal vascular system, in asthma, the pulmonary, in colitis and ulcer conditions, the gastrointestinal vascular system. At all events the problem is one of the structure of specific action syndromes and their autonomic accompaniments. We are led to this conclusion from the traumatic neuroses where we saw these action systems broken up. Meanwhile the data collected by the above mentioned authors cast much light on the occurrence of these defective action systems in individuals who otherwise, in their interpersonal relations, preserve a good deal of infantilism. Those reactions connected with the gastrointestinal system seem a bit more complex; here the utility of the organ function is perverted to some use of the organism as a whole, in the interest of evading a certain anxiety situation.

The development of the action syndrome and its autonomic accompaniments ought to be studied genetically. Recent work in physiology¹ indicates that the functions controlled by the autonomic system are unstable at birth and only by experience acquire the efficiency seen in adults. In this development many mishaps may occur. Some of these mishaps can already be observed in the early months of life. The skin conditions after weaning are a case in point. One such case I studied had a traumatic eczema for twenty years, beginning with weaning, when it gave place to asthma.

The last problem in dynamics is to explain that phase of the consequences of his inhibitions which ends in the claim for and dependency on compensation. This is a true secondary gain of illness, in some

¹ See W. B. Cannon, "The Wisdom of the Body," pp. 301-302.

instances so powerful as to decisively interfere with any therapeutic efforts. From what we already know of the psychopathology of traumatic neurosis, this dependency is an inevitable consequence of the contraction of the ego. The claim to be supported is psychologically justified by the complete inability of these patients to function normally. In this respect they are like children who are unable to look after themselves. In many instances, however, where the neurosis is chronic, and the adaptation on this contracted niveau allowed to stabilize with the condition of being compensated, therapeutic efforts are countered by the most violent resistance. And rightly so, since compensation is regarded as the only means of support possible, again because of the altered conception that the individual has of himself. The outbursts of aggression when compensation is withdrawn are always violent, at times even dangerous for the therapist. This issue we can take up in a subsequent chapter.

NOSOLOGICAL CONSIDERATIONS—THE PHYSIONEUROSES

We can now turn to the question: What kind of an entity is the traumatic neurosis? It is not a transference neurosis (anxiety hysteria, compulsion neurosis); nor is it a "conversion" hysteria. To classify it as a narcissistic neurosis would give us a vague qualitative standard but no information about the special configurations of the neurosis.

What gives these conditions the right to be called "neuroses" is the fact that they are essentially alterations in adaptation, with underlying inhibitions and modification of adaptive systems which miscarry—symptoms, and changes in fixed habitual modes of values, attitudes and behavior contingent on them—character traits. These characteristics they have in common with anxiety hysteria and compulsion neurosis.

They differ, however, in where the break in adaptation occurs, in the specific executive systems subject to inhibition, and the connection of these systems with the "internal environment," the mental images in which these executive systems are represented, and the types of psychic elaboration to which they are subject. In hysteria and obsessional neurosis the break in adaptation is in specific integrative systems

dealing with sexual impulses, relation to others, control of aggression, and so on. The psychic representability of these is very rich, the elaborations of which they are capable infinite in variety. In these neuroses the elementary adaptations to the outer world are secure, and, with the exception of conversion hysteria, body ego action syndromes are not much involved. In the traumatic neuroses the reference is chiefly to body ego, the psychic elaborations being poor, though the executive apparatus involved is the immediate sensory-psychomotor apparatus. So far so good. But difficulties immediately arise if we attempt to make these criteria the basis of a nosological differentiation.

No sharp dividing line can be made between these two orders of neuroses. The principles of psychopathology are quite the same in both, and the executive systems involved always intermingled. The basic structure of both neuroses is essentially the same: an inhibition followed by an alteration in ego structure to accommodate to the change in adaptation possibilities. The phenomena vary only in accordance with the psychic representability of the impulses involved, whether they are related to the social environment or the outer world, superego or body ego, whether or not the deleted activity can be substituted and whether the entire personality can alter itself to fit the new situation. In the case of the transference neurosis the opportunities are much better.

Nevertheless there is an important nosological issue, and for the sake of clarity, and if only to indicate where the predominant issues lie, a nosological differentiation is important. This is especially so because of the tendencies in psychoanalysis to describe nosological entities in terms of content. Thus we find an Oedipus complex in normal, hysteric, schizophrenic and character disturbances. The libido theory furnished a number of concepts such as anal sadistic fixation, narcissistic, pregenital conversions, and so on, which again only stressed content or quality. This was due entirely to the constructs made necessary by the use of *instinct* as an organizational concept. In these psychoneuroses, of which the traumatic is one, such designations according to content ignore the configurations of the neurosis. In short, the old classifications could not tell us why one Oedipus complex terminates

in an obsessional neurosis and another in epilepsy. Freud made an early attempt to describe the "Actualneurosen," and in this category were anxiety neurosis and neurasthenia. In connection with these neuroses Freud noted irritability, a diminished ability to tolerate accumulations of excitation, auditory hyperesthesia, anxious expectation, hypochondriasis, paresthesias, vasomotor disturbances, and so on. The essential pathology Freud considered an "accumulation of tensions which was prevented from motor discharge." The term "actual" does not describe very much, and I would suggest the term *physioneurosis* instead, because it describes more precisely the province of the ego involved, that connected with organ function, and the specific psycho-physical integrations.

However, to say that there are pure physioneuroses would be misleading; just as it would be to say that there is a pure *psychoneurosis*, without physioneurotic elements. If we predicate that a neurotic process always involves only a selective number of aspects of the ego, then there is no theoretical reason why such a neurosis should not combine psychoneurotic and physioneurotic elements. Such a case was described on p. 101. When we describe a neurosis as a physioneurosis we are merely indicating that certain types of ego function are *predominantly* involved.

There are several additional problems that are related to the one of the physioneurosis. In the study of hysteria and compulsion neurosis the somatic manifestations were interpreted in accordance with the rôle they played in connection with sexual conflicts—as substitutes for genital activity, or in some other relationship to them. Thus the content—in this instance sexual—was the sole guide. With regard to the form, namely whether the activity involved the mouth, gastrointestinal tract, and so on, the physioneuroses were generally accounted for on the basis of regression, in accordance with the tenet of the libido theory. Insofar as these physioneurotic aspects involved oral and anal activities, not much difficulty was encountered. But when the physioneurotic elements moved away from these zones, as in asthma, hypertension, skin lesions, the libido theory interpretations became more tenuous. The asthmatic spasms were most commonly related to oral activities, skin lesions to sexual, and so on. In other types of physio-

neurosis, like hypertension, the "aggressive instincts" were considered involved. All of these earlier explanations ignored the specific organic integrations involved and drew their meaning from some secondary process. More recent work by Alexander, French, Dunbar and others is correcting this early oversimplification.

I believe the problem can be clarified if we consider that these physioneurotic integrations are highly specific for each individual. It would be desirable to know first why a particular psychosomatic inter-relationship is singled out; second, what determines its form; and finally, the (secondary) method in which it can be pressed into some service. The latter is often not apparent.

A second problem connected with the physioneuroses is what clinical forms do they take? The traumatic neurosis is perhaps the simplest of these neuroses, and indeed, of all neuroses, because of the absence of highly complex combinations. In the course of these neuroses there are, however, a sufficient number of "complications" which indicate the direction in which these neuroses proliferate. Among these complications are:

1. epileptic conditions.
2. striped muscle spasms.
3. gastrointestinal group—peptic ulcer, spastic colitis, mucous colitis.
4. autonomic imbalances of all kinds, including fluctuations in metabolic rate, Graves' disease.
5. vasoneuroses, migraine, hypertension.
6. neurasthenia.
7. neurodermites—angioneurotic edema.
8. respiratory—asthma.
9. internal secretory—diabetes.
10. allergies.

These proliferations of the basic physioneurosis cover a wide range of functions; but it is not farfetched to assume that all these function systems are interconnected, largely through the autonomic system. These conditions cannot, however, all be considered parts of the basic physioneurosis; they may be organic complications engrafted upon it. Hypertension may be a case in point. The vascular hardening seems

in many cases to be secondary to the "functional" process, after years of standing.

The following brief case history indicates the complicity of these reactions following trauma.

A child of two and one-half years was struck by an automobile. Immediately thereafter he had a nystagmus, third nerve weakness, facial weakness, and head lacerations. He was unconscious for a few minutes and stuporous for several hours after. Within thirty days recovery was complete, as judged by complete disappearance of cranial nerve signs.

Then followed a series of behavior disturbances: marked irritability, sensitivity to noise (the sound of a locomotive would drive him to distraction), easily awakened, restless sleep, and refusal to eat. He couldn't play with other children as before the accident. His play was changed; impatient, he dropped things easily and broke them. Previously a contented, healthy, and happy child, he now whined easily, was constantly discontented, and clung to his mother all the time. He was shy and less enterprising than before.

Before the trauma he was on good terms with his little sister; now he was cross and irritable with her, and would assault her mercilessly. He often tried to gouge her eyes out, would step on her neck and walk on her abdomen.

Prior to his injury he had a slight eczema in back of his ears. As a result he was tested for allergens and reagens, and was not found sensitive to any. After the trauma he was again skin tested with the same allergens, owing to gastrointestinal disturbances, and found sensitive to fifty percent of the allergens tested. He began to have respiratory difficulties, asthmatic attacks, constant tearing of his eyes, conjunctivitis and constant nasal discharge. He began to have diminished resistance to illness, frequent colds, grippe. He developed a secondary anemia, a septicemia associated with cervical glandular infection. He had to be operated on, transfused, and treated with sulphanilamide.

One year after the trauma he still remains slightly irritable and restless; he treats his sister better; his rhinitis has cleared up and food allergies are diminishing.

What are the sequelæ of the trauma in this case, and what are the sequelæ of the "organic" injury? Many of the manifestations we have already encountered in the traumatic neuroses where no question of brain injury was present. They are, therefore, due to damage to an adaptation, and not to tissues.

The chief interest in this case at this point lies in the limits of the neurotic reaction, for there are two which are new and undoubtedly secondary—the allergies and the general diminution of resistance

to infection. The allergies seem to be related to the autonomic disturbances and the general diminution of resistance to the collapse of adaptation generally.

In short, in the physioneurosis we have the following succession of events: a break in adaptation, with a series of underlying inhibitions; the consequences of these inhibitions, introducing a series of disorganized reactions; secondary to these, certain somatic consequences whose physiological connections cannot yet be completely traced. These latter seem consequent upon the initial autonomic disturbance. The nature of the "secondary" organic disturbance varies, and some highly plausible hypotheses about the choice are now being worked out.

In the physioneurosis we have, therefore, an entity which lies in between pure disturbances in adaptation, and organic "disease"—meaning, of course, only autochthonous diseases. It is, however very difficult to make a transition from these organic conditions as complications of traumatic neuroses, to those which occur without any identifiable trauma. In some of these conditions, notably epilepsy, Graves' disease and diabetes, the incidence of trauma or emotional shock in setting off the disease, is very common. To this question there are two possible answers: 1) that they may be started by other means than traumatic, 2) that the inhibitions which are at their basis can be initiated by circumstances that do not appear traumatic and are, therefore, very difficult to identify. The only way to find the answer is to study the adaptation of subjects with these illnesses with great precision and detail, in the hope that the break in adaptation and the consequent inhibitions can be more precisely located.

SUMMARY AND CONCLUSIONS

The traumatic neurosis is the simplest of all neuroses. Notwithstanding its simplicity the skeletal structure of this neurosis proves to be quite the same as that encountered in the character neuroses. The difference between the two depends largely on the nature of the adaptive processes in each case which happen to be involved. The difference between the two types of adaptive processes can be illustrated by the contrast between the two propositions: "How many

ways are there to get along with father?" and "How many ways are there to hit a nail on the head with a hammer?" In the first case the adaptive maneuvers consist of kaleidoscopic changes in attitudes involving the control of autochthonous impulses all of which enjoy a varied and rich apperceptive representability. In the second there is largely a body ego component which can be appraised by physiological criteria and has a poor apperceptive representability which consists of only two modalities, namely either doing the act or failing to do it.

The traumatic neurosis is the record of the lasting consequences of an abrupt change in the external environment to which the resources of the individual are unequal. This situation we designated as trauma. The neurosis is, therefore, the record of the disturbance created by the trauma on the previously established adaptations. Secondly, it is the record of persistent and unrelenting efforts at restitution. These are the crucial events of the neurosis. The manner of recording or tabulating these events was contingent upon a certain methodological framework of constructs. Two aspects of this method are crucial: First, the genetic point of view and secondly, the point of view of the personality as a whole. The genetic point of view was essential in order to identify a) the manner in which the activities in question were synthesized and b) to identify the products of their breakdown.

The point of view of the personality as a whole was qualified by the use of certain operational units and of certain assumptions. We used first of all the construct ego, which means the personality as a whole from the point of view of direct experience and connotable by the pronoun "I." The assumption that we made in connection with this construct was that the ego is the product of experience and not a thing apart from it. This means in effect that the constellations established on the basis of the pain-pleasure principle qualify all subsequent adaptations. Furthermore we discarded the concept instinct and replaced it with the concept drive plus action syndrome and since the former was implicit in all action syndromes it ceased to be a differential. The action syndromes that we studied in this particular neurosis did not take in all the activities of the ego. It only took in one narrow portion of it, namely that connected with the body-ego func-

tions of orientation, motility, manipulation. Those aspects which make up the *character* of the individual, insofar as interpersonal relations are concerned, were not touched upon at all.

TABLE 1

Uninhibited Activity	Inhibited Activity
No obstacles (anxiety) leads to—	Obstacles interposed (anxiety)
Release of tension	No release
Gratification	No gratification
Pleasure	No pleasure
Attitude to impulse	Attitude to impulse
Confidence	Lack of confidence
Anticipation of gratification	Anxiety
+mobilization of motor and mnemonic images	Anticipation of danger
+picture of oneself as consummating act	Timidity inability to conceive of oneself as successful. Activity represented by opposite (pain)
+constellation "I can do that."	
Accessibility	Accessibility
Free, mobile, plastic	Not accessible, fixed, unplastic
	Representation—
	Masochistic imagery
	Consequence—
	New adaptation made necessary

We studied first the development of these action syndromes (Chapter IV) and then those factors which disorganized them (trauma). Then we studied the essential pathology (inhibition) and finally the consequences of the inhibition in the form of a new adaptation.

The concept inhibition had to be accepted as a datum, for nothing definite is known about the exact mechanism whereby it is instituted, although the process of avoiding pain is a self-evident reflex. Whereas there are no mysteries about its purpose or its provocation—some form of anxiety—the techniques by which it is effected in complicated reactions which are under no voluntary control still remain very obscure. However, they are no more obscure than the manner in which strong defensive functions are mobilized in the organism over which the individual exercises no conscious control. To mention only a few of these—leukocytosis, immunization, etc. These really illustrate the same principle. The ignorance of how this is effected does not prevent us from identifying the fact and following the sequelae.

One of the advantages we gained from the study of the integration of the action syndrome was that we were able continuously to observe the operation of the pleasure principle in its creation. It was this fact which elucidated the effects of the trauma and which made the significance of the compensatory efforts apparent. During the process of growth there is plenty of opportunity for choice in the event of failure except for the elementary functions of orientation and locomotion; but once the action syndrome is fixed by success new adaptations are more difficult to establish in the event that anxiety compels their abandonment. If, for example, vision is inhibited the function of vision is totally lost to the organism. Compensatory efforts may be made by pressing other sense organs into service but they do not have the quality of vision. We also observed in connection with these integrations the possibility of deriving gratification from faulty integrations. This is, however, the rare exception (see pp. 123-129).

The inhibitory processes and their sequelæ were studied by a) the identifiable products of the breakdown into effects on the personality as a whole (Table 1) and by b) contrast with the character neuroses (Table 2). The contrast demonstrates that the motive for inhibition is the same in both (anxiety, fear or fright) but that the technique of inhibition differed. In the traumatic neurosis it was by contraction of ego functions; in the character neuroses, which deal more with autochthonous stimuli coming from biological needs and their apprehensive representations, the technique was *repression*. In the traumatic neurosis the consequences of this contractile process was that: 1) The individual's unconscious conception of himself was altered; 2) the meaning of the outer world becomes altered; and 3) the internal regulating apparatus governed by the autonomic system is thrown out of consonance with the voluntary system, which is now blocked partially or completely. The gross significance of these contractile processes is that the effective ego is now altered as to size—it is smaller, and altered as to adaptive possibilities—they are distinctly fewer. It is, therefore, to be expected that the new adaptation is compatible with the new shrunken ego. This adaptation can be characterized as disorganized, mixed with regressive elements which cannot, however, yield any gratification except those which depend on the reestablishment of a parasitic existence.

The most challenging of all the phenomena encountered are those which deal with the disturbances in the autonomic system. Their significance is heightened by the fact that the chronic and persistent disorders of this system may have secondary organic sequelae.

TABLE 2

Traumatic Neurosis		Character Neurosis	
Inhibition		Inhibition	
Technique—ego contraction		Technique—Repression	
Motive force—anxiety—need to preserve body: outer world balance		Motive force—anxiety—social control or internalized superego	
Motive—Defense		Motive—Defense	
New Ego Structure	Consequences of Inhibition		Consequences of Inhibition
	Regression—oral mastery, etc.		Regression—erogenous zones
	Displacement—scanty		Displacement—abundant
	Passivity—inexpedient		Passivity—expedient
	Character changes—aggression, irritability		Character changes—innumerable variations
		Symptoms—defensive ritual or tic, sensory-motor, autonomic, epileptiform, altered conception of outer world and of self	
		Symptoms—legion—altered conception of relations to others and of own capacities	

This chart indicates that the two types of neurosis have the same basic structure, the differences depending on the character of the particular action syndromes which are blocked, and the opportunities for a new organization to take the place of the one abandoned.

The disorders of this autonomic system can be classified roughly in how they correspond to the normal physiological accompaniments of anxiety. Such a picture is found in the usual autonomic imbalance or what is called by Lewis the soldier's heart or "effort syndrome." This autonomic picture may or may not be accompanied by the affect of anxiety or terror in the chronic forms of the disturbance. The affect of anxiety may completely disappear and in fact in proportion as it disappears the more obtrusive these autonomic disturbances may become. In place of the anxiety or terror there remains a residual and

ever-present irritability. In the chronic cases the affect is generally not present nor are there any displacement phobias. But there is one constant always present in the traumatic neurosis, that the motility is always blocked or guarded while the need tensions which can only be released by activity continue unabated. Hence one can regard these autonomic phenomena as evidence of stasis since the autonomic system is not susceptible to inhibition—at least not by the same quantities of stimuli that are effective in inhibiting the skeletal system.

There is, however, another group of autonomic disturbances which are distortions of the normal physiological anxiety picture. And beyond recognizing this fact no definite clues exist. Whether these distortions are due to quantitative factors, that is greater intensity of stimuli or whether they are due to failure in the development of the action syndrome, this is still very obscure. These autonomic disturbances involve exaggerations of the activities of the gastrointestinal tract, vascular crises in the skin, lungs, kidneys and endocrine system leading to Graves' disease and perhaps to allergies. The occurrence of these phenomena in character neuroses, as demonstrated by Alexander, Dunbar, *et al.*, points to the action syndrome as the seat of the trouble. They all have in common some motor executive inhibition somewhere in the adaptation of the individual.

This conception of the pathology of the neurosis makes the catastrophic dreams and the outbursts of aggression intelligible. The first illustrates the altered conception that the individual has of himself. It is a well-established fact in the character neuroses that inhibitions do alter the individual's conception of himself, a conception which, moreover, cannot be overcome by fantasy. This can be easily seen in the dreams of hysterical subjects. The sadistic and masochistic phenomena can likewise be explained on the basis of ego disorganization, rather than on the basis of a change in the instinctual drive. (See Table 3.)

The last step in the neurosis is the effort to make the new adaptation useful.

The traumatic neurosis raises a nosological problem, notwithstanding its similarity to the character neurosis in its psychopathology. This difference lies in the particular functions involved. Since the difference lies in the fact that the traumatic neurosis concerns chiefly body ego

TABLE 3¹

Normal-Action Syndrome	Trauma	Altered Action Syndrome Chronic Effects	Secondary Effects
<i>Perception</i> by sense organ combinations + Coördination + meaning = <i>utility</i> Objective—exploit, avoid, manipulate, master, use, destroy, render ineffectual Attitude (to object)— <i>interest</i> Coördination + interest = investigation (curiosity)	Perception overwhelming Meaning—lost Objective—flight Attitude—fright, fear, panic, collapse Totally lost	Perception—may be dulled and confused <i>meaning modified</i> , utility is lost Objective—lost Wish to have done with or to get away from Anxiety and irritability	Diminished interest in the world
Executive—Somatic organ, whole motor apparatus Technique—muscular coördinative memory pictures visual + kinesthetic elements + knowledge of past successes.	Lost—loss of consciousness, paralysis or outburst of disorganized aggression	Executive system—greatly impaired; permanent local or temporary total	Disorganized activity—explosive outbursts; epileptic seizures; paralyses
Internal concomitants—autonomic activity	Conditions of disorganization	Overactive but disorganized, not consonant with external activity	All autonomic disturbances See p. 196
Accessibility to ego—free	Impeded	Not readily available—inhibited	
Modifiability—capable of modification—skill—inventiveness	Impeded	Slow recuperation, but not to erstwhile state	Work inhibitions
Effect on ego = self confidence, enterprise, "I can do that," ego enhancement, pride, satisfaction	Feeling of dissolution	Self confidence gone, internal picture of helplessness, no picture of completion of act, continued frustration, no pride	Catastrophic dreams
Control—By external sense of reality + integrity of physical apparatus → except normal fatigue	External reality overwhelms ego	External reality is overwhelming	Limited intellectual and physical activity

¹ The necessity of tabulating the comparison between the normal action syndrome and the effects of trauma unfortunately destroys some of the interconnections between the various elements of the action syndrome itself.

The normal action syndrome is made up of perceptual, coördinative and executive elements. All of these together constitute an integrative unit. Through the interaction of these various elements objects in the outer world acquire a special meaning, namely utility. In the relations to the objects in the outer world one can discriminate various

action syndromes and the character neurosis is concerned chiefly with the government of autochthonous impulses and the relations to others, a nosological differentiation is justified. Hence the name *physioneurosis* was suggested. Physioneurotic mechanisms are present in all neuroses and the name of the neurosis merely indicates the domain predominantly involved.

Our final problem is the one with which we started, namely, how is this theoretical concept of the traumatic neurosis reconcilable with the general theory of the neuroses? The only change made was the supplanting of the operational concept instinct, a conative principle, by the action syndrome, a morphological principle. This led to an abandonment of the approach of adaptation from the point of view of the pursuit of instinctual goals to that of the organizing apparatus, the ego. From this point of view the growth and development of adaptive maneuvers could be observed in all aspects of adaptation—the physical and human environments.

These two aspects of development are simultaneous, and mutually influence each other. There are many vicissitudes in both. Those most thoroughly studied were the satisfaction of biologically determined needs (hunger and sex) in relation to the human environment. The influences of frustration and consequent repressions have been thoroughly studied. Similar failures can occur in the adaptations to the outer physical world; but here the child has, except for a few basic adaptations like orientation, a wide range of choice to develop one aptitude as against another. The principles of integration are the same in both aspects of adaptation, and the consequences of inhibition follow similar lines in both. The traumatic neurosis is one consequence of the inhibition of fixed body ego functions, which once established, cannot be replaced. The modality of passivity is not successful, except in the one form of utilizing the reduced capacities as a claim for support.

forms of utility, namely to exploit, to avoid, to manipulate, to master, to use, to destroy, to render ineffectual, etc. The attitude to the object is one of interest. An integral part of the action syndrome is the normal autonomic activity that accompanies the other forms of activity. The normal action syndrome is one that enjoys free accessibility to the ego. It is modifiable in the form of higher skill. This free accessibility together with the memory of past successes creates the feeling of self-confidence.

PSYCHOSOMATIC MEDICINE MONOGRAPH II-III

PART III: PRACTICAL

VI. COURSE, PROGNOSIS, DIFFERENTIAL DIAGNOSIS

COURSE

THE COURSE of a traumatic neurosis is influenced not only by intrapsychic factors but by a large number of external ones. Generally speaking, the course of any traumatic neurosis is likely to be chronic if it serves the patient the use of a secondary conscious or unconscious gain. This is true of all clinical types, whether the clinical form corresponds to the transference neurosis or those that approximate epileptic reaction types. Of the external factors, the most important of all that tend to render the neurosis chronic is compensation for the resulting disability. This issue we shall consider in detail in another chapter.

In the study of the chronic forms we encounter a great variety of stages of convalescence. Were the course of the illness not modified by external or secondary factors, in the greatest number of cases, I would say, the spontaneous course of the illness is in the direction of slow improvement. Even under the most favorable circumstances, however, the spontaneous course of recovery is extremely slow. In a previous chapter we referred to a case seven years old, in which we noted that the annihilation dreams were replaced by a series of dreams of oral frustration. This type of dream represents a considerable convalescence from that represented in the original annihilation dreams. In this particular case the convalescence was aided by the patient's retreat from his former occupation—flight from noise, effort and competition, to an occupation that barely kept him alive. In the expense at which his comfort is bought, this patient's adaptation is of the same type found in transference neurosis, where comfort is bought at the price of a great many inhibitions and restrictions.

Cases of this kind represent a spontaneous "cure." This stage, however, is the best possible result that this particular case can have without treatment. Such individuals often learn to exist without compensation.

The extent of spontaneous recovery possible is determined early in the course of the illness. Those cases which in the acute form were marked by stuporous conditions or delirious excitements, with hallucinatory episodes, as a rule improve from the acute stage, but remain fixated in one or another form of epileptoid repetition. Once the pattern is established, they tend to remain either stationary or to make slight improvement spontaneously. Many of the cases having epileptic phenomena in the first two years, improve to the extent of losing the epileptiform reactions, but continue to have severe autonomic crises, at times even terminating as Graves' disease. In this stage they are chronic. My own experience has enabled me to follow some of these cases eight years after the original trauma.

These traumatic neuroses do not get worse with time; I have never seen a case that was worse at the time I saw it, than at any time previous. The neurosis, having but little capacity for displacement, does not gather new appendages or alter its surface manifestations with the exceptions noted above.

As regards the specific types, the course varies somewhat. Those that terminate as transference neuroses, pathoneuroses, show no traits different from others of the same character.

The tics and defensive ceremonials are subject to long chronicity. The latter are extremely favorable for treatment, the former much less so.

The paralytic cases, monohemiplegias, and so on, have a chronic and unaltering course. In the acute stages most of the paralytic phenomena disappear. The aphonias, mutisms, deafness, blindness and anosmia tend to recover in the early part of the course. But once permitted to become chronic, these paralytic forms continue unaltered and develop contractures. From the point of view of internal comfort, however, these paralytic cases are a fortunate termination. They sleep well and their conflict with the outer world is quieted—at a price, to be sure. Nonetheless they establish an effective though costly, peace.

The epileptiform cases are mainly subject to a long, chronic and unaltering course. As a group they are the least likely to spontaneous change.

PROGNOSIS

In the acute stages the prognosis in all forms of traumatic neurosis is *good*. But this is contingent upon whether there are organic complications, whether or not they are treated properly, and how much of a rôle the issue of compensation is allowed to play. The experience of Murri in the Messina earthquake indicates, that, uncomplicated by compensation, the largest number of cases recover. Few exposed to the trauma escaped neurosis; but most recovered within a few weeks, almost none remaining after six months. Murri's experience cannot, however, be regarded as typical; the catastrophe was here universal, conditions being the same for all concerned, (69).

The prognosis is best for transference types and worst for the epileptiform cases.

Stammerers as a result of trauma usually represent revivals of earlier infantile traumata. I have never seen a case of stammering produced by trauma that was not based on a history of stammering earlier in life. The prognosis is poor even with treatment, no different, in fact, from stammering encountered in civilian practice.

Sensory-motor disturbances, if not recovered within six months, are as a rule hopeless. Hypnotic treatment in the acute stages is most helpful but not after the reaction is fixed and becomes a source of gain.

The autonomic disturbances are among the most uncomfortable outcomes of traumatic neurosis. The efficiency of such individuals is inordinately impaired and their discomfort constant. They do not yield readily to treatment, being, for the greater part, inaccessible to therapy. Atropine is a palliative in some cases.

The epileptiform types are by far the most interesting and socially important group of the traumatic neuroses. Though not the largest number among the clinical types, they are a social and therapeutic problem of great importance. Quite evident from the writings of observers of post-catastrophic conditions is that these epileptiform cases separate themselves from the remaining conditions produced by trauma.

The prognosis in these epileptiform conditions is good, if there is no injury to the brain, if they are treated immediately and not per-

mitted to leave medical care before complete recovery. What inevitably happens is that the basic neurosis existing, when the patient is permitted to attempt resumption of his normal routine and is thus given the opportunity to establish his incapacity, he is bound to accept it and use it for all possible secondary purposes of gain. Compensation, if it is possible, is the worst of these gains. If compensation is given on an income basis, these epileptiform cases are rendered almost hopeless.

The prognosis in such cases is not uniformly good. In the acute stages it is very difficult to establish which are and which are not hopeful cases. There are not many criteria to use in establishing which are the most favorable cases. Generally the most useful standard is whether the ensuing reactions are in proportion to the severity of the traumatic experience. An epileptiform reaction following upon being frightened by a dud is not likely to have a good prognosis. On the other hand epileptiform reactions following upon traumas that occur while the subject is asleep are likewise likely to be poor.

No definite idea of prognosis in these cases can be made without an attempt at therapy, and careful observation of how they lend themselves to abreducational procedures.

DIFFERENTIAL DIAGNOSIS

Differential diagnosis is a psychiatric as well as a forensic problem. From the psychiatric side the traumatic neuroses present very few difficult problems in differential diagnosis. Pathoneuroses usually follow upon injury of some narcissistically important organ. Schizophrenia has none other than the usual standards; the same is true of those cases where the trauma is utilized as punishment, which end as transference neuroses.

Psychoneuroses—character neuroses. In the acute stages the predominance of displacement phobias (fear of insanity, claustrophobia, etc.) are indicative of the fact that the current danger situation is utilized to exaggerate old, longstanding disorders. More often the reverse is true; severe psychoneuroses are in complete abeyance when the subject is away from the irritating situation at home. Many a

severe obsessional neurosis tolerated the war and its severe traumata, only to return home with the old neurosis worse than ever.

Autonomic disturbances are readily identified by the usual clinical methods. The derivation thereof from the traumatic experience can, as a rule, be easily determined from the dream life. Repetitive catastrophic dreams are absolutely pathognomonic.

In the acute stages the autonomic disturbances are as a rule consonant with the affect, terror. Their persistence after the manifest terror subsides is often the stabilized form of the neurosis. Lewis calls this symptom complex "the effort syndrome." Differentiation must be made from cardiac disease and Graves' disease.

The sensory-motor disturbances and the epileptoid reactions present many difficult psychiatric and forensic problems. These are the cases in which suit for damages soon becomes the central problem in the entire illness. The patient who develops a hemiparesis after a trauma will, ten times out of ten, sue for damages. Then comes first the question of the nature of the symptom: Is it "hysterical" or is it organic? These cases are found not only in war neuroses, but very frequently as a result of train, automobile, street car and factory accidents.

The "hysterical" character of the symptom can be established by the usual neurological standards which are too familiar to repeat. It must be noted that in these cases the typical dream life of traumatic neurosis is *absent*, and the patient accepts the symptoms at first with the same "belle indifference" as in all other forms of conversion hysteria, where the symptom is unconsciously made to serve the end of a secondary gain. Coöperation from the patient is extremely hard to elicit in the establishment of unconscious motives. However, where the symptom is a solution to a problem in human relations, the patient is more likely to be coöperative and permit psychoanalytic investigation.

Hypnosis is, of course, a very useful method in these paralytic disturbances to establish differential diagnosis; but the patient has the legal right to refuse hypnosis, which in either case cannot be done without his coöperation. It would be an exceedingly rare occurrence

for a patient with such a paralysis, who knows of the eventual use he can make of his symptom, to consent to hypnosis.

In the absence of the possibility of hypnosis, observation of the use the patient makes of the limbs or side during sleep is an excellent substitute for the establishment of legal requirements of diagnosis. Another method is to suddenly wake the patient out of sleep; before fully awake these hysterical paralytics may move the affected limb. The differential diagnosis of these "hysterical" paralyzes from malingering is along the same lines as those in established use in neurological practice.

By far the most difficult problems in differential diagnosis are presented by the epileptiform cases. This is important from both the forensic and the psychiatric side. The condition for which they are most likely to be mistaken is essential epilepsy. Very definite and distinctive criteria for such differential diagnosis, however exist:

1. How the symptom began with reference to the trauma

In the traumatic neuroses the epileptiform phenomena begin within a few weeks after the original insult. In essential epilepsy the connection between the two, if there was a traumatic incident, is not likely to be so intimate.

2. What features are premonitory to the lapse of consciousness

Are the attacks initiated by external stimuli, such as noise, or some special feature resembling the situation in the original trauma? This latter is likely to be the case in traumatic neurosis and not in epilepsy. It is like a finely conditioned reflex.

3. The character of the aura

In essential epilepsy the aura is usually some somatopsychic sensation which does not appear to have connection with any trauma. In traumatic neurosis the aura is usually distinctive, constant, a reproduction of the last sensation felt by the patient before he originally lost consciousness. It may also occasionally reproduce a sensation experienced after consciousness was regained.

4. The character of the dream life

In traumatic neurosis—especially in the early stages, within the first year of the trauma—the dream life is pathognomonic. It has

the characteristics described in the earlier chapters in the book, and usually contains reminiscences of the original trauma.

5. The character of the seizure

In the traumatic neurosis the seizure is rarely a typical epileptic convulsion. The movements, likely to be coördinated, do not correspond to the myoclonic type. Moreover, they frequently resemble movements of combat and may be associated with vocal accompaniments of combative excitement. There is usually no tongue biting or relaxation of sphincters. Loss of consciousness does not set in so abruptly, and as a rule the patients do not hurt themselves when they fall.

It must, however, be remembered that some cases precipitated by trauma are essential epilepsies. In these cases no differential criteria can be established. The question of legal responsibility in these cases is difficult to dispose of. But since predisposition cannot be established, the traumatic insult ought to be considered provocative and therefore compensable.

6. The Electroencephalogram can be used to establish the presence or absence of organic injury to the brain. This might be useful in establishing positive proof in litigating cases.

7. The startle reflex (Landis) can be used to differentiate true epilepsy from traumatic neurosis.

Malingering is likely to present difficulty only when paralytic symptoms are simulated. In this instance surprise techniques and hypnosis can be tried. Apart from this type, no malingerer can simulate the syndrome of the traumatic neurosis unless he is coached. But even in this case he could not simulate any of the autonomic disturbances. The combination of distinctive dream life, irritability, autonomic disturbances, and character changes are proof positive of a traumatic neurosis.

VII. TREATMENT

THE PSYCHOPATHOLOGY of the traumatic neurosis has furnished us with a series of indications about therapeutic goals and procedure. The fact is that although several previous methods of treatment were based on a very incomplete conception of the psychopathology, several of them were quite successful in the acute stage. This is notably the case with hypnotic treatment, so commonly employed during the last war.

It is important to know why hypnosis was effectual. Most therapists who did hypnosis operated on the theory that the subject was suffering from repressed images and affects associated with the traumatic event. In the hypnotic sleep it was generally suggested to the subject that he was in the original traumatic scene, and would under these conditions "relive" the event, thus informing the physician of the forgotten memories, which he would then impart to the subject. This invariably resulted in considerable *abreaction*, which was supposed to effect a cure.

However, the matter is not quite so simple, as may be proven from the chronic cases where *abreaction* by itself has no curative value. The reason is that the whole ego structure has been altered in these chronic cases, and the *abreaction*, since alone it cannot alter the new ego structure of the traumatic neurosis, is quite irrelevant. These hypnotic cures were successful in the acute stages of the neurosis, because the structural changes had not yet taken place. In fact, the early hypnosis occasionally stopped the automatic contractile process. This practical bit of knowledge is often employed by aviators who immediately fly after an accident, because they know that if they defer it for a week their confidence will be gone, and they will fear going up again.

The task of therapy in the acute cases is, therefore, to prevent the natural defensive processes from operating, so that a new ego structure becomes stabilized. This is the chief reason for haste in treating these cases, and explains why the chronic cases present such difficult therapeutic problems—particularly when compensation for the neurosis

has been instituted. This means of deriving a gain from the neurosis is the most serious handicap in treatment. I have often seen patients come diligently for treatment as long as nothing was being accomplished and break off suddenly when they felt it was leading to some cure. In some instances symptoms were relieved before the patient quite knew what was happening, and he would immediately fly into a series of hysterical phobias. The compensation completes the neurotic adjustment, and from his point of view the patient is justified in his panic at recovery for now he must reassume some responsibility for himself. Many patients will actually lie about their improvement.

ACUTE CASES

The therapy in acute cases varies according to the presenting clinical picture. The objective of the treatment must be to *prevent* the neurosis from becoming stabilized in one of its contractile forms. This can be done only by encouraging the patient to establish connection between his symptoms, the trauma, and his now budding tendencies to retreat. Whether the technique used is hypnosis or more direct means does not much matter. My preference is against hypnosis, because in the acute stages it is easier to get the patient to see the connection between the defensive process and the provocation. The traumatic incident itself is the handiest material to use, and the patient's sense of external reality and of himself should not be allowed to change. The amnesia for the trauma is not the cause of, but only one of the manifestations of, this altered sense of reality. The present situation of being in the hospital and under treatment must already be interpreted by the patient as a successful outcome of the encounter, which indeed it is.

In the comatose and maniacal cases no active therapy can be undertaken until the subject is accessible. In the type of case described on p. 54 the treatment must essentially be a re-education—a recapitulation of the first three years of life.

TREATMENT OF ACUTE CONDITIONS

According to Dillon (64), the neuroses developing on the battlefield are 1) fearful states accompanied by shaking, jumpiness, dizziness and headache; 2) confusional or stuporous conditions; 3)

paralyses and mutism; 4) fugue states with amnesia. The relative proportions are: group 1, 70 percent, group 3, 2 percent, groups 2 and 4, 10 percent. Most of the cases of groups 1 and 2 cleared up spontaneously after a few days rest. Those with fugues and amnesia were troublesome and generally had to be evacuated. In these conditions rest, sedatives, and hypnosis were effective in 63 percent of the cases. A large proportion of the cases in group 1 recovered completely without recurrence.

These fresh cases are the most important to treat immediately. For this purpose an atmosphere of rest and assurance are of the greatest importance. Female nurses are to be preferred to look after the general care of these cases. The treatment should be directed to two goals: to alleviate the immediate discomfort, and to prevent the neurosis from consolidating.

The immediate relief must be directed to insuring rest and sleep. But this cannot be done by the use of sedatives alone. These do help, particularly barbiturates, which diminish sensory sensibility and because of their vasodilator effect. No time, however, should be lost in instituting psychotherapy as soon as the patient is accessible. To compel the patient to become aware that his present environment is secure, the attitude of the physician and nurses is most important.

Cases in this stage can be treated in groups. The large number of these cases precludes individual care. Hypnosis in groups, mild electric shocks with the implication that it has curative value, are all useful provided that with them are implied the protective and benevolent attitude of the physician.

The ease with which these subjects can be hypnotized is in itself a characteristic of the neurosis. It is an indication of the infantilism which pervades the neurosis. The readiness to be hypnotized is an indication of the eagerness with which these patients seek a protector. The procedure is an indicator of the willingness with which they endow the physician with magical powers in order to enjoy the benefits of his protection.

No permanent benefits from hypnosis can, however, be expected in any but the sensory-motor disturbances—unless it is followed up by other re-educative measures. The function of this re-education is to

enable the patient to see the world as it is, and to restore his confidence in adapting to it. The combination of hypnosis and analytic procedure is likely to be very successful in these fresh cases, because the secondary effects of the neurosis have not yet been established. Simmel (86) and Hadfield (64) had great success with this method. The latter author reports 90 percent cures in the fresh cases.

The psychopathology of the disease furnishes us with the clue that the recovery of the amnesia usually accompanying the trauma ought not to be made the objective of treatment. This is of value only in the acute cases. The real objective should be re-education, and to this end activity, particularly manipulative activity should be relentlessly instituted.

Informal talks to groups about the nature of the illness should follow the above measures. Mutual exchange of experiences should be encouraged to increase tolerance for hearing of disagreeable experiences. Their tolerance will naturally be small for this procedure, for the natural defensive tendency makes them try to escape hearing about traumatic experiences. This would also serve as an assurance that they have not alone been the unlucky victims of disaster, and that they need not feel especially ashamed of their reactions. An esprit de corps can thus be created, and also an atmosphere of mutual help. Games can also be encouraged or even made obligatory.

Numerous cases in groups of this kind will have to be removed, if they spoil the spirit of the group, because the failure of one case may infect the entire group with relapses. Those cases intolerant to this procedure may have to get individual care for a time.

The greatest difficulty in these acute forms is found in connection with those severe cases needing individual treatment. This is a tax on the organization of a hospital staff, for these patients need at least half an hour a day for months. A physician cannot treat more than a handful of cases at a time. It is these cases which do not respond to the crude therapeutic procedures who are candidates for a chronic neurosis.

For the treatment of these cases the physician must be specially trained, and have a special interest or aptitude. It is arduous work for the physician, for he must be extremely "active" in these cases, and often has to labor long to establish a favorable contact. These patients

are not of the kind whom one can merely invite to talk about themselves. They are not talkative, are generally sullen, immobile, cramped, and their intellectual capacities contracted.

The opening step must be made by the physician; if he does not do so nothing is likely to happen. A maternal, nurse-like attitude is reassuring, together with inquiries about minute details about their immediate welfare. Inquiries about food and sleep and bowels, etc., assure the subject of an interest which he so much needs. At the same time an intimation that the physician knows why the patient is there, and is thoroughly acquainted with the symptoms and the distress the neurosis causes is a great help. One can thus come none too abruptly to the question, "What happened?" From this point one must leave the initiative with the patient, for he knows his tolerance better than you do. His reactions must be respected, for they have a defensive intent, or the case will be lost to treatment. In amnesic cases one must begin by respecting his amnesia, and begin with what he *does* remember, and allow the patient to take any direction he wants. Inquiries about past history have no direct therapeutic value, but they start the patient reminiscing.

Since the aim of the treatment is re-education, encouragement of every minor achievement is important. This encouragement has a twofold purpose: to urge him to further achievement, to guarantee support if he needs it, to free him of the idea that the world is hostile and that his powers to control it are gone. The patient's unconscious tendency is to exaggerate the physician's powers to magical proportions and that these powers are at the subject's disposal. In this he should not be disappointed, but this fantasy should be used to push the patient to greater conquests. When that is achieved the fantasy of omnipotence will disappear, and never return.

The traumatic event itself will sooner or later become a preoccupation with the patient. The recovery of amnesia is always facilitated by his current triumphs. This should always be gradual. Too abrupt an approach will often terminate in a repetition of the original reaction, and both physician and patient may be injured by the outbreak of uncontrolled violence which this releases. The physician must be acquainted with this possibility of violent outbursts and protect him-

self accordingly. During this period sleep may be disturbed more than usual, and all symptoms aggravated. This is consistent. But no opportunity should be lost to show the patient that 1) these reactions are appropriate defenses, 2) that the world is no longer hostile, and 3) that his powers to master it are growing.

Patients treated with the above outlined procedure are more proof against recurrence of symptoms than those with hypnosis, though in a field or base hospital the time factor makes hypnosis a time-saving device.

CHRONIC CASES

In chronic cases the treatment is more difficult, because we are now dealing with a markedly altered ego structure. The following describes the successful outcome of a chronic epileptiform case of seven years' standing.

The patient, a man thirty-one years old, came to the clinic complaining of severe headaches, fainting attacks or "spells," as he called them, insomnia, distressing dreams, constant apprehensiveness, inefficiency, and fear of high places. At the time he first reported to the clinic, so feeble that his wife had to accompany him, he appeared very haggard and depressed. His story was that his fainting attacks and general apprehensiveness were so severe that he could make no persistent effort of any kind, could not be retained in vocational training and was entirely dependent on the government for maintenance. His attacks came at frequent intervals, occurring every day during the first four years after the war, though only about three times a week during the last year. The anxiety dreams, which in part caused his insomnia, were all of the same character—falling from high places. Nothing in his pretraumatic history was relevant to his present condition. Married in 1915, he had for a while thereafter no regular employment. He was a first class machinist in the aviation section of the army.

He suffered only one accident while in service, was discharged as a result of his disability and since his return has been treated for various conditions—pulmonary tuberculosis, neurasthenia, epilepsy; was operated on for a floating kidney resulting from the injury; and had several other minor complaints.

All the patient's complaints followed in the wake of the trauma that he suffered. He was in an airplane one day, when, at a height of 3,000 feet, something went wrong with the machine. Apparently one of the wings crashed, and the plane began to fall. At the time he first recovered consciousness he had a complete amnesia for all details of the fall and could only remember awakening to find himself unstrapped from the plane and climbing up the

tail. He lost consciousness again and woke up to find himself in the hands of a rescue party. There was an interval of several hours between the time of the fall and the time of rescue, since he fell into a marsh which was difficult to reach. Shortly after he was taken to the hospital he had his first fainting attack. These attacks had since recurred at very frequent intervals.

There was no way of determining the exact nature of the attacks described. His wife was asked to come to the clinic to give a description and from both the patient and his wife the following account was reconstructed. The attacks lasting from twenty minutes to half an hour, were of variable intensity. They could be brought on by external stimuli, such as a great deal of noise or some other form of irritation. The patient himself supplied the information that the attack was initiated by a *queer sensation in the pit of the stomach*, sometimes by a queer pain in the forehead, and was followed by a loss of consciousness. His wife said that during the attack he was impervious to stimuli, could not be roused, that he muttered to himself, that he occasionally frothed at the mouth, and once bit his tongue. There were no convulsive movements, but a kind of rigor and blueness of the face. On one occasion he had an attack away from home, and was told by those who observed him that he showed convulsive movements. The loss of consciousness was not always complete, the patient retaining at times some contact with the environment, though he was unable to make voluntary movements or speak. He always emerged from this attack very weak, in sweat of agony and anxiety. The anxiety dreams which he had at night made sleep horrible, being so distressing that he almost preferred not to sleep. They were always about falling off some high place—mountain or building. While awake, the patient naturally avoided all high places.

Markedly underweight at the initial examination, he had a history of having had tuberculosis. He had several somatic injuries as a result of the fall—a cut on the forehead and a dislocated kidney. His complexion was dusky. Pulse rate and heart were normal. Neurological examination was negative, except for eccentric pupils and a hemianesthesia on the left side. Apprehensive and irritable, he felt considerable falling off of interest in the outer world, family, and work.

The patient began by not being very coöperative. Treatment for his condition had become a routine matter of getting more pills and he found my questioning decidedly unpleasant.

This first reaction to me was taken as a starting point. He was urged to try to make clear to himself why the procedure was so unpleasant and of a consequence made him want to stay away. After considerable fumbling the patient recognized that his reaction was due to the fact that he felt uncomfortable while with me and had a considerable lag of discomfort after he left. The next step was to identify the nature of this discomfort and his answer was, "I don't like to be thinking about those things you make me think about; I'm trying

to forget them." Furthermore, the "feeling worse" meant also that when he talked to me, particularly about the circumstances of his trauma, he had a "queer sensation in the pit of his stomach—the way I often get before I go off." After a little more prodding about the nature of this sensation he said it was "like going down in an elevator very fast." This was the first clue and I showed him immediately that he was reproducing the traumatic event. That is, the sinking sensation in the abdomen was actually the experience he had in the falling plane immediately before losing consciousness.

This part of the work consumed several weeks. The patient and I then came to an agreement that we would not press the treatment beyond his endurance and that at any time he began to feel too sick he could interrupt the session. This option apparently impressed the patient very much and in the subsequent interviews I could easily observe that his tolerance was increasing, as judged by the length of time he would stay. In this manner all his hallucinatory symptoms—such as the cutting sensation on his forehead—could be reunited to his original experience in the cockpit. At this point the patient spontaneously recovered the knowledge of why he could not fall asleep. He could not abandon himself to sleep because whenever he closed his eyes, images of being in the airplane would obtrude themselves, from which he would immediately try to get away. And this he could only do by remaining awake. The patient thus got to understand that the insomnia really represented an unwillingness to abandon himself to an ever present awareness of the traumatic situation, and that he was continually reproducing the experiences he had had on the original occasion. As he learned that we could practically reproduce at will all the symptoms that distressed him, the patient eventually became convinced of the truth of my explanation.

A word must be said at this point about the nature of his reaction to me. At first I played the rôle of a tormentor whom he was trying to avoid. Consequent upon his first understanding of the nature of his attacks I became a protecting parent, this being easily discernible from the exclamations he would utter during these first weeks of the treatment. Frequently, as he was about to lose consciousness he would shout, "Doc, hold my hand; there I go;" and a reassurance on my part would often abort the attack. In this way the patient began to trust me and to follow my efforts with greater eagerness. It was not very difficult to convince him of two important things. First, that all these devices he was using were defensive maneuvers of a more or less reflex and disorganized kind. And secondly, that these defensive devices were quite irrelevant to the actual world in which he was living. Once this had been done it was not a difficult task to show him the further consequences of his defensive maneuvers. They were taken up in order, utilizing all the banalities of his daily life to illustrate the point—his intolerance of his children, the loss of aptitude for work, his lack of concentration, and so on.

Within a month or six weeks the frequency of his attacks began to subside

and the patient learned not only to tolerate but actually to rehearse the traumatic event, this latter to such an extent that he actually recovered most of the details of the fall in the airplane. It must be noted here that this was not abreaction. It was a re-education of his sense of reality, and it was due only to the fact that the patient learned to appreciate the reality in its true form that the therapy had any avail. Perhaps the most striking feature during his convalescence was the fact that he was able to sleep, the disturbing dreams ceasing both in frequency and intensity.

The treatment lasted about six months and the results achieved at that time were truly dramatic. In addition to the above mentioned consequences were his increasing interest in his family, his ability to participate in normal social activities, and finally, his efforts to go back to his old occupation of being an automobile mechanic. He could now tolerate the shock of a sudden noise, and the backfire of an automobile would not throw him into spasms. I considered him at that time a sufficiently good result to dismiss him. I asked him, however, to return from time to time to report on his progress and to fill in any gaps that we might have omitted. During the next three months he reported to me spontaneously once. On this occasion he told me that during his absence he felt so completely recovered that he had even ventured to try another flight. He made the flight without mishap. Six months after this—that is, about fifteen months after treatment was begun—I sent for him with the idea of checking on the permanence of the improvement. During this interval he had been working all the time as an automobile mechanic, was entirely self-supporting, and had had but three attacks. The first two of these were minor in character but the last, as he put it, “was a pip. . . . It was the worst attack I ever had in my whole life.” Needless to comment, my disappointment was very keen. However, I asked him to describe his experience fully and the following was his story.

“The day on which I had my last attack I got up in the morning after a bad night. I don’t remember what I dreamed, but I did feel very blue. There was something on my mind, but I did not know what it was. I had a small job to do that day which was to take me only a couple of hours. I didn’t feel much like working but did, and I came back to lunch. I didn’t feel very well and decided to take a walk. I did that for a while, then I went home. Again I felt restless and went to a movie but did not stay to the end. I finally decided that I would go to bed early. I slept until about 4:30 in the morning, when I woke up suddenly with a terrific pain in my back, running up to the base of my head. And I remember waking up crying, “George . . . George.” (George was the name of the pilot in the plane which collapsed.) I remember seeing my wife; I remember that she left the room and that somebody else came in with her—one of the neighbors. She asked me what was the matter with me

but I couldn't answer. I didn't lose consciousness, but kept staring into one corner of the room which was dark and I saw something. I saw all this and yet I was in it. It looked as if I and George started out in the plane and we flew around for a while. Then we developed some engine trouble and had to land. We had it fixed and then we started out again. We got just above the clouds when I told my buddy to get down underneath the clouds. He paid no attention to me so I took the plane from him—that is, the controls—and began to get down under the clouds. Just as we were going down I noticed another black object coming from the clouds. It was another plane, but we couldn't get away from it in time. All of a sudden we heard a crash and the right wing collapsed, clear over our heads, and we started right down. I couldn't do anything; I lost all power. I thought of my buddy because I knew he was nervous. I remembered that I had to jump. And then there was a sensation of striking the ground and the buckle which held my strap unloosed and I began to climb up the tail of the plane."

Then there followed a description of the rescue party and of how the patient, after helping to pull his buddy out of the space between the motors, held him in his lap. Then followed something in his hallucinatory panorama which was apparently not in the original experience. The scene shifts from the falling plane to his bedroom, where he sees his buddy alive. The latter hands him a photograph of himself and then places it on the buffet. This ended the dream or hallucination.

The patient came out of his experience weak and in a sweat. He said that it was the worst attack he had ever had and insisted that it was not a dream because he remembered shouting, "George;" remembered seeing his wife come into the room; and recalled making the effort to move and speak, neither of which he could execute. He said that it took him an unconscionable time to recover his composure and that when he was completely himself again it flashed through his mind that the day of the attack was the ninth of February, exactly seven years after the original fall from the plane. He remembered, furthermore, that on the preceding day his wife had taken his buddy's picture from the wall and put it on the buffet, as happened in the hallucination.

This episode was quite remarkable. Such complete recovery of amnesia is the kind that takes place only under the influence of very deep hypnosis. Secondly, it took place on the anniversary of the fall. Thirdly, it reproduced many details of the original accident for which the patient had previously an almost complete amnesia. Although much of this amnesia had been lifted in the course of the treatment there were still a considerable number of details which he had forgotten. He recalled for the first time that he was in charge of the controls when the accident took place; that the accident was caused by a collision with another plane; that the right wing had broken off; his concern

about his buddy; how his buckle had become unloosed; and finally, how he held his buddy in his lap after the rescue party had reached them. As to the meaning of the last episode—his buddy placing his picture on the buffet—it is probably another way of undoing the whole traumatic incident, because it assures him that his buddy did not die. However, no conclusive construction about this episode could be reached with the patient. The time the patient saw me was about a month after this last episode. He had been feeling well since and had had no more discomforts of any kind. I had only one further contact with this patient and that, some six months after this last reported episode. He had been well during this entire period. On the strength of my knowledge of his case I ventured to predict to him that he would probably never again have another attack for the rest of his life.

To consider that the therapy consists of the lifting of the amnesia would be an error. This cannot be made an objective of the treatment for the reasons indicated. The amnesia is already a symptom of a collapse in ego resources and of the continuous defensive policy of the new adaptation. The amnesia can be lifted only when the individual's picture of the outer world has been changed, when his courage and resources in handling this new external reality have been increased or restored, at least in part, to their erstwhile state. The circumstances instrumental in the creation of this hallucinatory episode were several. Some were accidental, such as his wife's taking the picture from the wall and putting it on the buffet; another was a repetitive phenomenon, namely the anniversary of his fall; and finally the patient showed in the ability to reproduce the whole original event that his resources were equal to it without losing consciousness.

This case is of considerable social importance. Five or six years of this man's life were wasted, during which he was a public charge, when the course of the case indicates clearly that he could have been completely rehabilitated within six months, had the proper diagnosis and treatment been supplied. It follows that if this patient were able to get well after six years, then he surely would have been able to recover within the first six months. However, it must be said of this particular case that the neurosis had not become irretrievably calcified behind a rigorous defensive ego structure. He was pervious to influence; he reacted to me as a child to a parent. But this was a favorable circumstance. It is not unlikely that one of the things that happens in some of these severe epileptiform cases is a calcification of the entire

personality, including the ability to retain even a childish attitude toward those they can trust.

FURTHER POINTS IN TECHNIQUE

The attitude of the physician in treating these cases is that of the protecting parent. He must help the patient reclaim his grip upon the outer world, which can never be done by a perfunctory, pill-dispensing attitude. The task of the physician in taking this rôle is, however, extremely difficult if the physician is directly responsible for the patient's receiving compensation, for the two rôles are now diametrically opposed. Being responsible for the patient's compensation on the one hand, a rôle in which the physician acts as a benefactor; and on the other, being one who compels him to stand on his own feet again. This latter rôle of the physician is always resented by the patient because he regards himself as resourceless. The central part of the therapy should always be to enlighten the patient about the nature of his defensive maneuvers and to utilize every detail of his day-to-day adaptation in pointing this out. Every effort should be bent to re-educating the patient to the actual realities in which he lives rather than to the dangerous and inhospitable world in which he fancies himself.

Patients who become absorbed in the task of recovering their amnesias should be permitted to do so. Thus one patient occupied months in reconstructing a scene from fragments produced in dreams night after night. This does no harm provided the other aspect of the work, namely, the re-establishment of more effective contact with the world, continues. The search for amnesic fragments can in this manner become a pastime for both physician and patient, without much progress being made along the other and more important front.

As regards the use of hypnosis in these chronic cases, although it does no harm, it is unlikely to do very much good.

Does the therapy prove the conception of psychopathology? Yes, and no. Successful therapy does not always prove that the theoretical basis on which it is founded is correct. Many a good result is achieved on a faulty theory, and often an incontestible theoretical basis results in practical failure.

The therapy does, however, prove the main contentions of the psychopathology. The fact that these dreams disappear coincident with improvement in general adaptation, as measured by working capacity and meaningful contact with his environment, cannot be an accident. Also the fact that the change in adaptation is due to a basic inhibitory process—of which the amnesia is only one of many manifestations—seems to be well established. But from this point on our psychopathology is undoubtedly incomplete. The further pathology we do not yet know—that secondary to the initial inhibitions, and terminating in a complete occlusion of the outer world, its meaning impoverished, and the ego continuing to function at a much reduced level. The only way to recover these finer details would be continued study of these chronic incurable cases. Most of the chronic cases are difficult to treat and the results poor, though some improvement can usually be effected. In this regard the patient described above was the exception and not the rule.

HOSPITAL ORGANIZATION FOR TREATMENT

During the last war, all the powers, our own included, were totally unprepared for the problems of the traumatic neuroses. This caused great discomfort during, and expensive blunders after, the war. Not only was the organization defective, but there was no trained personnel anywhere. The traumatic neurosis, though an established entity, was not recognized in the protean forms it is capable of assuming. The result was very confusing.

Organization is partly dependent upon the type of warfare. Plans constructed on the basis of war techniques in 1914-18 may be useless today. The last was a war of position, with a front line, which, though it fluctuated, was fairly constant. This type of warfare no longer exists. Moreover, the bombing of urban centers puts the civilian in a worse position than the soldier.

The distribution of hospitals cannot, therefore, be made solely with reference to the battle line, but will have to be made irrespective. Such focal points had preferably be located far from urban centers.

The hospitals devoted to the treatment of these conditions need a

minimum of the usual hospital equipment, but need a great deal more of recreational and vocational therapy equipment. (Preferably they should be subdivisions of a general hospital.) More than all else they need to be staffed by individuals with special training, both as regards physicians and nursing personnel.

Personnel. Physicians should be trained in neurology and psychiatry. In addition they should have had the opportunity to witness the treatment of these cases from reception to discharge. They should be given courses in psychopathology of these neuroses, and inducted into treating these cases under supervision of more experienced superiors. No physician with a perfunctory attitude to this work, or devoid of the necessary acumen should be allowed to treat them. Kindness, patience, tolerance are prime requisites in the physician apart from technical knowledge. Such a physician must, moreover, become acquainted with all the psychosomatic complications of traumatic neuroses, to prevent serious errors in differential diagnosis, and needless operations.

Nurses. For this women are to be preferred. A maternal attitude is helpful. These should also be taught the pathology of the neurosis, and might even assist in the treatment. They must be taught the special emergencies accompanying the nightmares.

Recreation Orderlies. Their qualifications should be like those of nurses.

Social workers. In postwar care the social worker has an important rôle to play. Her training should also include a thorough knowledge of the psychopathology, and the social implications of the disease.

Hospital Selection. In the acute cases patients should be ordered by a combing process. All should begin with the crude mass treatments. Convalescents should be separated from cases which do not move and taken to separate wards. Individual treatment should be reserved only for intractable cases, and preferably treated in hospitals especially devoted to these disorders.

Records. The problem of the traumatic neurosis has many unsolved facets. No fruitful research can take place unless it is coördinated by a purpose centrally directed. For this reason a research staff should

be an integral part of the organization for treatment. The problems of such a research staff are to analyze the material with respect to selecting and eliminating cases:

- a. before induction into service
- b. after induction into service
- c. before active service
- d. after active service

The analysis of this material may yield some information on the still unsettled problem of predisposition or the pre-traumatic personality. Besides analysis of the efficacy of therapeutic procedures, an important function of this research is the study of the postwar career of the soldier. This is a social problem of the greatest importance.

PROPHYLAXIS AND CIVILIAN MORALE

The traumatic neurosis is not a preventable disease in the same sense that typhoid fever is. As long as there are war, shells, airplanes, and accidents, these neuroses will occur. In war, however, some control over the situation can be exercised because the soldier who succumbs to a severe traumatic neurosis gives many early indications of the later course. Some of these indications can be used before induction to service. Men with a history of convulsive seizures of any kind, who are "fainty," who "can't stand the sight of blood," who are inordinately sensitive to physical pain, who "give in," easily to physical exertion, stammerers and tiqueurs, are good candidates for traumatic neuroses. On the other hand these criteria are not always reliable, for many of the severest cases I saw were in exceptionally brave men, with extraordinary powers of endurance, and with the exception of convulsive phenomena, cannot be used to exclude men from service. However, once in service they should be watched for autonomic disturbances in ordinary routine. Exaggeration of tics, stammering, fainting spells in service should be enough to warrant removal to less strenuous duties. These people can be safely relegated for duty to clerical work or in the medical corps, for the reason that being active to others who are sick often acts as a deep restorative to confidence. The chief reason for eliminating these men from combatant duty is that

they decidedly spoil fighting morale, and their removal from a company has the same effect on the others as their elimination by death. Moreover, a convulsive attack during action will infect and demoralize a whole company. The elimination of these men is, therefore, a part of good military discipline.

From this point on, prophylaxis has the objective of preventing the incurable forms of the disease. Those with organic injury of the central nervous system can be identified by the electroencephalogram, and should never be returned to combatant service. Those whose electroencephalogram is negative must be dealt with as outlined above. The prophylaxis is really cure in the milder forms of the neurosis.

One cannot leave the subject of prophylaxis without a consideration of the traumatic neurosis in civilians living in the war zone. Aerial bombardment places the civilian in the same position as the soldier except that the former is much worse off, having none of the latter's defenses. He is that much worse off in that he has nothing to do but wait for annihilation, than which there is no more exhausting predisposing factor. Add to this the fact that aerial bombardment on urban centers has largely the purpose of inducing neurosis, and we have in this a major problem in mental hygiene, as well as an important war measure.

The "war of nerves," now such a widespread instrument of war, is a subject that needs separate treatment. Our only concern with it is that it is one of the weapons in use today, which seeks not to destroy the individual, but to render his opposition ineffectual. This weapon produces a special type of neurosis which is not a traumatic neurosis; but it does have a relation to it. It is, as Crichton-Miller aptly observes, a measure which is the direct opposite of psychotherapy. Its intention is to produce mental disorder, and not to cure it.

The objective of the war of nerves is to render the enemy unwilling to resist; to fatigue him with endless threats, to frighten him with noise, to belittle and ridicule his combative powers, and show him how great are your own. Among the weapons used is the bombardment of urban centers and this is why it enters our focus.

Traumatic neuroses among civilians will of consequence be nu-

merous as a result of this type of warfare. No systematic reports have yet come through, but the likelihood is that the incidence must be at least as high as that among soldiers. Children and the aged are said to have greater tolerance for traumatic experience than those in the intermediate age group.

The best prophylactic is adequate shelter against air raids, for relatively few neuroses will occur except in those at or near actual explosions. But the loss of adequate sleep and relaxation continuing over long periods will put the civilian in the same position as the trench soldier. Active participation in some maneuvers, some appointed duty is recommended by Crichton-Miller. This has the advantage of aiding to remove the feeling of helplessness.

SUMMARY

The psychopathology of the traumatic neurosis has taught us that 1) the subject's conception of the outer world and 2) his conception of his own capacities to deal with it have undergone a profound change. This is effected by a contractile process involving effective resources. The aim of therapy is 1) to revise these reciprocal images of self and outer world to accord with the *now actual reality* and not with that which prevailed on the occasion of the trauma; 2) to prevent this altered conception of self and outer world from becoming consolidated. Should this take place, the subject will have no choice but to use this new ego organization as the basis of his adaptation. This has serious personal and social consequences.

This therapeutic objective can be achieved by various means. In acute stages group treatment is possible. It can be done with or without hypnosis. The amnesia is not the cause but a consequence of the defensive process; it should not be made the central focus of the treatment. Amusement, occupational manipulative activity, competitive games should be encouraged. Care must be exercised to separate unresponsive cases for individual treatment.

Chronic cases present difficult problems in therapy, especially when complicated by compensation. The principles of treatment are the same, but might be aided by hypnosis or sedative drugs.

VIII. FORENSIC ISSUES

ONE OF THE CERTAINTIES with which a warring nation must contend is that at the termination of the conflict there will be a considerable number of problems dealing with those soldiers who return more or less damaged. One of the forms which this damage takes is the persistent traumatic neurosis. The victims of this neurosis become not merely a medical problem—a pressing one, to be sure—but, owing to the peculiar circumstances that surround its onset and the strange phenomena associated with its course, a pressing social problem as well. They become a social problem largely because one of the symptoms of this neurosis is a persistent diminution in the capacity for work. This is true not alone of the very severe epileptiform cases, but of many of the milder neuroses which are merely characterized by autonomic disturbances. The victims are a social problem because there are difficulties of rehabilitating them to become socially independent individuals; and because several of the conventional methods of dealing with them complicate and aggravate the already existing medical problem. Among these aggravating factors perhaps the most pressing is the issue of compensation.

However, the problem of the postwar traumatic neurosis is really not different from the same neurosis in peacetime. Hardly a traumatic neurosis occurring in civilian life is not sooner or later complicated by the fact that the individual feels that the responsibility for his incapacity can and should be shouldered by someone else. In the case of the war neuroses this responsibility is acknowledged by the government. In the case of peacetime traumatic neuroses this aspect is largely covered by insurance companies. In this issue the patient and the company find themselves each defending opposing interests—the one to get as much as possible, and the other to give as little as possible. This situation is, moreover, complicated in peacetime because the criteria for accurate diagnosis of traumatic neurosis have heretofore been lacking. Great decisions are made upon “authority,”

on hunches, beliefs, and opinions. Furthermore the words "hysterical" and "functional" have acquired a strange meaning in the public eye. Not altogether without reason does public sympathy attach most readily to obvious and dramatic disability. Disorders of the personality as a whole cannot be seen with the naked eye, are difficult to demonstrate, the diagnosis depends upon the use of criteria not even commonly accepted by physicians; and so when the words "hysterical" or "functional" are used to characterize a neurosis its social meaning is that the subject is a predatory individual, trying to get something for nothing. The victim of such a neurosis is, therefore, without sympathy in court and, with some reluctance it must also be stated, without sympathy from his physicians, who often take "functional" or "hysterical" to mean that the individual is suffering from some persistent form of wickedness, perversity, or weakness of will. On the other hand, it not infrequently happens even in civilian life that the companies which cover these claims suffer as a result of inadequate medical diagnosis. Many is the traumatic neurosis that is compensated for indefinitely long periods by insurance companies when the truth is that the neurosis is curable.

It all comes to this: The social problems and the medical problems converge, and no social solution can take place unless there is a sound medical basis for it. As the matter stands now many aspects of the traumatic neurosis which become social problems are of such character as can be prevented by good medical practice.

Under the conditions of war, however, where the question of responsibility is not questioned, and where the numbers involved are so large, four immediate aspects of the problem present themselves. The first is whether or not traumatic neuroses should be as numerous as they are. The second problem is what form rehabilitation should take. Third, should the patient be compensated and, if so, when and how? Fourth, what methods should be used in dealing with the incurable cases?

As regards the first point, there is little doubt but that the number of traumatic neuroses existing in their chronic form during the postwar period can be very substantially reduced by adequate care immediately after the trauma. However, in order to do so, a machinery

must exist for the treatment of such conditions, and during the last war no such regime or machinery existed. In fact, the traumatic neurosis occupied a kind of No-man's land between the departments of organic neurology, internal medicine and psychiatry, and many of the cases were bandied about from one department to another for years before definite diagnosis was made. Many cases received no treatment until three, four and five years after the original trauma.

An organization for treating these cases requires time to establish. Further, it is not enough that those who actually do the work should be psychiatrists. A physician cannot be expected to know about the various forms of traumatic neurosis merely because he is a psychiatrist, since, for the greater part, these neuroses are exceedingly rare in civilian practice. The personnel for treating such neuroses must be trained in the principles and psychopathology before they are allowed to handle these cases. It is of the greatest importance, both for the patients themselves and for the government, that an organization for treatment of the acute cases should exist, because the prognosis in these early phases of the disease is excellent if treatment be instituted before the neurosis is permitted to become stabilized. Six months after the trauma is already, in many instances, too late to begin treatment with much hope of complete recovery. In short, the first social aspect of the problem of traumatic neurosis is that it is a disease which is for the greater part preventable.

Even should such an organization exist, a considerable number of cases diagnosed as traumatic neurosis will not yield immediately to treatment. It is difficult to state percentages, but my guess would be that at least fifty to sixty percent of traumatic neuroses—Hadfield says 90 percent—can be completely rehabilitated by prevention. The treatment of these chronic forms would require a large organization of trained psychiatrists. With all this, the prognosis in many of them would remain extremely dubious. The problem then becomes what is the next best thing to do with these cases if one cannot cure them. One can rehabilitate such patients by seeking to give them work suitable for their diminished capacities. This is a problem for vocational guidance experts, but from the point of view of psychiatry it is important that these individuals should be re-engaged at any cost in

some form of activity. A third method of dealing with the problem is compensating the disabled veteran by either the lump sum method or the income method.

After the last war the issue of compensation in traumatic neuroses created many embarrassing situations for patient, for government and for physician. The procedure was generally routinized. Income was given in proportion to the apparent disability and after a variable time this compensation was reduced, very often without any definite results from therapy. The results of this procedure were very unsatisfactory because, on the one hand, many veterans abused this opportunity to exploit the government; and, on the other hand, many permanently disabled individuals were mustered out of treatment which was wholly ineffectual, and allowed to drift on their own reduced resources.

These embarrassing situations would not have arisen had there been a machinery for the diagnosis and care of traumatic neuroses within the first six months after their onset. By far the most important forensic aspect of the traumatic neurosis is that it should not be allowed to become stabilized. The victims should be treated immediately and thoroughly at the onset to insure complete rehabilitation. Soldiers who have definite traumatic neuroses should not be sent back to front line duty but relegated to some service in the interior. The reason for this is that one little traumatic neurosis predisposes to another, much more severe. The worst cases observed were those who were "blown up" six or seven times. The diagnosis of traumatic neurosis once established, if the individual remains refractory to treatment for more than a month, he should be disqualified from further exposure to shell fire. These cases terminate in the hopeless epileptiform types, which are utterly inaccessible to therapy after six months and are really permanently and totally disabled.

These epileptiform cases generally fared very badly. For the greater part they were not diagnosed as traumatic neuroses and many, like the case described in the previous chapter, had a history of being treated for years as epileptics with sedatives, naturally without any abatement of symptoms. These individuals, furthermore, do badly if they take their cases to court and there attempt to establish them-

selves as totally disabled. No jury can vote compensation for total disability to a man able to walk in and out of the courtroom, to take his seat on the witness stand, speak intelligently and show no outward signs of disability. While it is quite true that the government must protect itself against exploitation by veterans, at the same time it must be recognized that these cases suffer under the very grave handicap of not appearing very sick, of having no demonstrative disability—like an amputated limb or blindness, and hence make no appeal to the sympathy of a jury. Since compensation rests largely on the idea of damage, these cases have difficulty establishing their claim. Once the prosecuting attorney and his medical aide are able to attach the diagnosis “hysterical” or “functional” upon a claimant, the latter is made to bear the moral blame for the neurosis. Thus, the practical result of diagnosing these cases as “functional” is that the patient is without sympathy in court and without authoritative medical defense.

It is quite apparent from these considerations that no adequate disposition of these cases can be made until the symptoms of this neurosis are recognized, and until its psychopathology is thoroughly understood. On this basis only can a rational method of dealing with post-war care of traumatic neuroses be established. Otherwise, both government and veteran suffer grave injustices.

On the basis of what we know in this book about the traumatic neuroses we may attempt to answer the question of whether this neurosis should be compensated. The answer is decidedly that it should not. What then should be done with these cases? They should be cured. Moreover, the treatment should begin immediately, and not after the patient has been confirmed in his neurosis and is trying to establish an adaptation consistent with his now reduced resources. On this latter basis the patient has a right to claim his compensation since he is really unable to adapt to the world as he could prior to his neurosis. Once the patient learns that his disability can be used as a means of compelling the world to recognize his claims for dependency, it is then often too late to begin treatment with any chance of a successful issue. Very often I was confronted in the treatment of these cases with the most profound resistance, based entirely upon

the idea that if the patient got well he would lose his compensation. Such a state of affairs should never be allowed to arise, and could not were the patient considered in government service as long as he was being treated, and not discharged until he had been rehabilitated.

Whereas this recommendation might hold for a very large percentage of those cases with mild traumatic neuroses treated immediately after they occur, it must nevertheless be recognized that a certain percentage will not respond to immediate treatment. There is no question but that the government needs to shoulder the responsibility for the care of these cases, for, even if we assume that there is a constitutional predisposition to traumatic neurosis, it must be emphatically stated that predisposition alone cannot produce this disease. It always needs a violent precipitating factor and only the confluence of both factors can create a traumatic neurosis.

In other words, only those cases which fail to respond to treatment within the first six months should remain to be dealt with as problems of readjustment. For the disposition of these cases a considerable choice of methods suggests itself. Vocational re-training sounds theoretically correct and plausible, yet it often happened that many of these veterans were no better at their new vocation than at the old. I do not believe that most of these severe epileptiform cases can be rehabilitated for any vocation, and these are the cases in which compensation may be given.

However, the question of how this compensation should be given is difficult to answer—whether in the form of a lump sum or monthly installments. Perhaps the most suitable disposition of these cases, since they are really not so numerous, would be to place them in convalescence camps, where they could be trained to run half self-sufficient enterprises with limited responsibility and constant medical care.

In summary, we may say that the social issues connected with the traumatic neurosis can only be established on the firm basis of an established psychopathology which is capable of universal acceptance. This problem cannot be simplified and surely not settled as long as such vague concepts as “hysterical” and “functional” are allowed to be used in connection with traumatic neurosis, and as long as it is not publicly recognized that there is such a thing as a disturbance

of the entire personality which is invisible to the naked eye, which makes no dramatic appeal, and which requires a set of experts to diagnose and skillful treatment to effect a cure. The social problems are chiefly those connected with the reduced capacity for work, which means for the individual concerned a complete readaptation in his mode of life. Compensation should properly be reserved for only those cases proven to be incurable after treatment for two or three years under custodial care, before the individual has learned that his illness can be used as a means of profit. Of the various methods of compensation, the lump sum method works out best in the long run for the government, but not for those veterans who are permanently disabled. On the other hand, the method of compensating by income works out seriously to the disadvantage of the government and, in the long run, also for the patient.

IX. OPEN QUESTIONS AND FUTURE PROBLEMS

THE END OF A BOOK is an opportunity for retrospect and prospect, a chance to probe out its weaknesses and to decide on future research. Some parts of the thesis in this book have been checked by myself and several others many times, and are of consequence those parts which seem most secure. They are the clinical forms of the neurosis, and the general outline of the therapy.

With regard to the clinical phenomenology, particularly those details which can be elicited under conditions of personal treatment, these can be much improved. The coöperation of internists, ophthalmologists, otologists, rhinologists, neurologists, would greatly enlarge on the actual phenomena of the disease. The peculiar mental characteristics in the form of paucity of thought, stereotyped imagery, narrow range of intellectual effort, all these are traits which need more accurate description, and may yield much to a better understanding of the entire syndrome.

As regards the theoretical reconstruction more doubt exists. Within ten years I have completely altered the explanation of what occurs in the creation of the pathological phenomena. This was due to an alteration in operating tools. The general conception of the psychopathology has not been altered.

It must, however, be acknowledged that the evidence for a complete theoretical reconstruction is still lacking. There are too many gaps in the material. As a result some questions remain unanswered though some suggestions have been offered. This is notably the case with the problem of predisposition to the neurosis. The difficulties in solving this problem are great. The personality under investigation in a chronic traumatic neurosis is one that has already been much modified by the neurosis, and cannot be investigated by the usual analytic technique as long as the traumatic neurosis obtrudes itself. And after cured they generally refuse to coöperate further for such an investigation. Hence the problem still waits. The character neuroses mixed

up with the traumatic neuroses are just like the character neuroses of civilian life and hence yield nothing distinctive on this point.

This problem may eventually be circumvented by statistical compilations. However, this is not possible without a large staff with a uniform objective. This is not easy to achieve.

In the domain of therapy, the chronic cases are still a mighty challenge, especially those cases in which organic injury is well excluded. For a time I considered that the intractable cases were those in which transference of the usual infantile type could not be established. This proved to be incorrect; cases with capacity for a childish trust and co-operation proved intractable after several years of persistent effort. The possibilities of chemotherapy in these cases yet needs to be explored.

The influence of the traumatic neurosis on the emotional relationships is still poorly understood. I have often regarded the traumatic neurosis as a kind of organic paranoia, with the outer world in the rôle of the arch persecutor. Once I had the opportunity to observe this paranoia realized in the form of a vindictive and violent jealousy of a woman whom the subject married ten years after his original trauma. His neurosis was one of the severe epileptiform type. His inadequacy toward the outer world was "displaced" onto his wife with great violence.

By far the most important genetic problem of tracing the reciprocal relations between the body ego development and character development awaits solution. The difficult problems in psychosomatics lie concealed in how the specific autonomic patterns are established. The interferences which the infections of childhood, especially the severe ones of scarlet fever, pneumonia and others offer to normal growth must be explored. The sketch we gave of body ego development must be studied in much finer detail than was presented.

On the sociological side many problems await answer from statistical analysis of large numbers of these cases. The distribution of traumatic neurosis as regards age, status, education, rank, as against urban origin, volunteer or draftee, army and navy. Comparisons with civilian incidence in all levels of status and nature of trauma would be useful. Pretraumatic history should be investigated as fully as pos-

sible. Information not available from the patient should be obtained by social workers.

The history of cardiac, vasomotor, endocrine disturbances should be elicited. Electroencephalogram, basal metabolism and other clinical tests should be done. Rohrschach tests and general intelligence tests should be recorded.

QUESTIONNAIRE ON TRAUMATIC STATUS

The following questionnaire is a guide to the relevant information on the status of traumatic neurosis.

Age

Date and place of birth

Parents—age

Siblings—age

Birth

premature or full term

character of delivery

state at birth

feedings after birth

Weaning

induced when—special reactions

Sphincter control

how inducted—reactions noted

Body ego development

rapid or slow

age at walking

teething and reactions to it

was he constantly falling?

character of play with toys

favorite games

speech development

sibling reactions

special aptitudes or failures in childhood and reactions

intellectual growth

Relations to others

to mother
to siblings
to father

} Details and special characteristics

Schooling

began when
grades
special talents or failures
aptitudes for arts or mechanics
education continued for how long?
relationship to authority and playmates

Sexual Development

masturbation in childhood—reactions to threats
when begun and when stopped
first sexual contact
relations with women

Vocational

History of occupation
How was choice made; plan or chance?
character of work and interest in it
lose jobs, and why?
steady at work—attitudes to work, slowness or speed, interest

Marital status

character of relationship to wife and to children, to relatives

Military History—Training

volunteer or draftee
where first inducted
military record
reaction to officers—to subordinates
tolerance for work, routine, monotony, sexual abstinence
disqualified or disciplined for anything
venereal disease
A.W.O.L.
Reactions to training—fellow feeling, coöperative or strange
special reactions—"fainty," could he stand sight of blood, how did he
stand injury

pugnacious or passive
illnesses—how tolerated, exaggerated or minimized
character of sleep—restful, disturbed, and by what

Active duty

when sent to active duty
assignment
tolerance for shell fire, fatigue
anxiety, terror, convulsions
cardiac reactions
Urinary reactions
diarrhea or constipation
appetite and fluid intake
sweating
spasms—intestinal or laryngeal—asthma, stammering
reactions to emergencies

Traumatic History (to be repeated for each trauma)

When did it happen?
initial memory
extent of amnesia
initial reaction—stupor, excitement, fugue, terror
loss of consciousness
initial hospital reaction
kind of therapy
how long treated
returned to duty or hospitalized

Physical status

Neurological status + visual fields. Taste and smell.

Special tests

blood count
blood pressure—cardiac reserve
electroencephalogram
urinalysis
cardiac reserve test
Rohrschach test
intelligence test
startle reflex—in epileptiform cases (Landis)

Psychiatric status

facies—rigid, flexible, smiling and laughing facies

head motion—gait and manual dexterity
attitude to physician
response to treatment

Symptoms

work history, if in civilian, or internal history of active duty between
hospitalizations
chief complaints
how long after trauma did they begin
sensory-motor
rituals
autonomic
epileptiform

Character changes

pugnacious
maudlin
reactions to fights

Dream life

catastrophic
frustration
other types

Therapeutic history

recovered
improved
unimproved
nature of residuals

BIBLIOGRAPHY

1. ABRAHAM, K.: "The Development of the Libido" in Selected Papers. Translated by D. Bryan and Alix Strachey, Int. Ps-A. Library, No. 13, 1927.
2. ALEXANDER, F.: Psychoanalysis of the Total Personality. N.Y. and Washington: Nerv. & Ment. Dis. Pub. Co., 1930. Trans. by Bernard Glueck and Bertram D. Lewin.
3. ALEXANDER, F. AND ASSOCIATES: The Influence of Psychologic factors upon Gastro-intestinal Disturbances. *Psychoanalyt. Quart.* 3:501-588, 1934.
4. ALEXANDER, F.: Emotional factors in essential hypertension. *PSYCHOSOM. MED.*, 1:173-179, 1939.
5. ALEXANDER, F.: Buddhistic Training as an Artificial Catatonia. *Psychoanal. Rev.* 18:129-145, 1931. Trans. by Margaret J. Powers.
6. ALFVEN, J.: Das Problem der Ermüdung. Eine psychologische Studie. Stuttgart: F. Enke, in *Abhandl. a. d. Geb. d. Psychotherapie. Med. Psychologie*, H. 6. 1927.
7. ANTONI, N.: War neuroses. *Svenska Läkartidn.* 36:2097-2100, 1939.
8. ARING, C. D. AND BATEMAN, J. F.: Nurturing a National Neurosis. *J. Amer. med. Ass.* 109:1092-1096, 1937.
9. BERNFELD, S.: Die Psychologie des Säuglings. Berlin: Springer, 1926. Trans. by Rosetta Hurwitz, *The Psychology of the Infant*. London: Kegan Paul, Trench, 1929.
10. BERNFELD, S.: Über Faszination. *Imago*, 14:76-87, 1928.
11. BETHE, A.: *Handb. d. Physiologie*. Bd. XVII, pp. 105-132, 69-713.
12. BONHOEFFER, K.: "Geistes und Nervenkrankheiten." In: *Handb. d. ärztl. Erfahr. im Weltkrieg*, 1914-1918. J. A. Barth, Leipzig, 1922. (Schjerning) IV.
13. BRESLER, J.: Traumatic neurosis according to German court decisions. *Psychiat.-neurol. Wschr.* 41:453-455, 1939.
14. CLARK, L. P.: *Clinical Studies in Epilepsy*. Utica: State Hospital Press, 1917. (See bibliography there.)
15. DEUTSCH, H.: Über Zufriedenheit, Glück und Ekstase. *Int. Z. (ärztl.) Psychoanal.* 13:410-419, 1927.
16. DILLON, F.: Neuroses among combatant troops in the great war. *Brit. med. J.* 2:63-66, 1939.

17. DUNBAR, H. F.: Psychoanalytic Notes relating to Syndromes of Asthma and Hay Fever. *Psychiat. Quart.* 7:25-68, 1938.
18. EDER, M. D.: War Shock. W. Heineman, London, 1917.
19. FEDERN, P.: Das Ich als Subjekt und Objekt im Narzissmus. *Int. Z. (ärztl.) Psychoanal.* 15:393-425, 1929.
20. FEDERN, P.: Narzissmus im Ichgefüge. *Int. Z. (ärztl.) Psychoanal.* 13:420-438, 1927. (Trans. *Int. J. Ps-A.*, IX.)
21. FENICHEL, O.: Über organlibidinöse Begleiterscheinungen der Triebabwehr. *Int. Z. (ärztl.) Psychoanal.* 14:45-64, 1928.
22. FENICHEL, O.: Hysterien und Zwangsneurosen. *Int. Ps.* Verlag, 1931. (Trans. *Psychoanalyt Quart.* 1, 2: 1932, 1933 and Norton, 1935.)
23. FENICHEL, O.: Outline of Clinical Psychoanalysis. Norton, New York, 1934.
24. FERENCZI, S.: Psychoanalytische Betrachtungen über den Tic. In: *Bau- steine der Psychoanalyse I*, *Int. Ps.* Verlag, 1927.
25. FERENCZI, S.: Versuch einer Genitaltheorie. *Int. Ps.* Verlag, 1924.
26. FERENCZI, S.: Hysterie und Pathoneurosen. *Int. Ps.* Verlag, 1919.
Translation in *Further Contributions to the Theory and Technique of Psychoanalysis*. Boni & Liveright, New York, 1927.
27. FERENCZI, S. WITH I. HOLLOS: Paralytische Geistesstörungen. *Int. Ps.* Verlag, 1922. (Psychoanalysis and the Psychic Disorder of General Paresis. Authorized English translation by Gertrude M. Barnes and Gunther Keil. *Nerv. & Ment. Dis. Pub. Co.*, Washington, 1925.)
28. FERENCZI, S. WITH ABRAHAM, SIMMEL AND JONES: Psychoanalysis and the War Neuroses. *Internat. Psycho-Analytic Press*. No. 2, 1921.
29. FRENCH, T.: Psychogenic Factors in Asthma. *Amer. J. Psychiat.* 96: 87-101, 1939.
30. FREUD, S.: Formulierungen über zwei Prinzipien des psychischen Geschehens. *Ges. Schr. V.* (Trans. in *Coll. Papers*, IV, 13.)
31. FREUD, S.: Neurose und Psychose. *Ges. Schr. V.* (Trans. in *Coll. Papers*, II, 250.)
32. FREUD, S.: Zur Einführung des Narzissmus. *Ges. Schr. VI.* (Trans. in *Coll. Papers*, IV, 30.)
33. FREUD, S.: Triebe und Tribschicksale. *Ges. Schr. V.* (Trans. in *Coll. Papers*, IV, 60.)
34. FREUD, S.: Die Verdrängung. *Ges. Schr. V.* (Trans. in *Coll. Papers*, IV, 84.)
35. FREUD, S.: Das ökonomische Problem des Masochismus. *Ges. Schr. V.* (Trans. in *Coll. Papers*, II, 255.)
36. FREUD, S.: Jenseits des Lustprinzips. *Ges. Schr. VI.* (Trans. by Hub- back: *Beyond the Pleasure Principle.*)

37. FREUD, S.: Das Ich und das Es. Ges. Schr. VI. (Trans. by Riviere: The Ego and the Id.)
38. FREUD, S.: Hemmung, Symptom und Angst. Ges. Schr. XI.
39. FREUD, S.: Dostojewski und die Vaternötigung. Almanach d. Psa., 1930.
40. FRISCH, F.: Epilepsie. Z. ges. Neurol. Psychiat. 103:243-255, 1926.
41. GOLDSTEIN, KURT: The Organism. Am. Bk. Co., New York, 1939.
42. GRAVEN, P.: Die aktive analytische Behandlung der Epilepsie. Fortschritte der Sexualwissenschaft und Psa. Vol. I. Leipzig und Wien.
43. GRUHLE, H.: Epilepsie. Art. in Bumke's Handb. d. Psychiatrie, 1930.
44. HOFFMAN, R. W.: Die reflektorischen Immobilisationszustände im Tierreich. In Bethe's Handb. d. Physiol., XVII, 690-713.
45. HUDDLESON, J. H.: Accidents, neuroses and compensation. Foreword by J. R. Hunt, Williams and Wilkins, Baltimore, 1932.
46. ISCHLONDSKY, N. E.: Der bedingte Reflex. Berlin u. Wien: Urban & Schwarzenberg. (In his Neuropsychie u. Hirnrinde.), 1930.
47. JELLIFFE, S. E.: Nervous diseases following accidents. Accidental injuries to the nervous system with special reference to the traumatic neuroses. Repr. from Schweitzer on Trial Manual for Negligence Actions. Baker, Voorhis & Co., New York, 1937.
48. JONES, E.: Psychoanalysis. Ed. 3. Wood, New York, 1928, pp. 513-521.
49. KARDINER, A.: The Bio-analysis of the Epileptic Reaction. Psychoanalyt. Quart. 1: No. 3-4, 1932.
50. KATZ, D. Der Aufbau der Tastwelt. Barth, Leipzig: 1925.
51. KEIBEL, F. AND MALL, F.: Handb. d. Entwicklungsgeschichte d. Menschen. Vol. II. Leipzig: Hirzel, 1910.
52. KENNEDY, R. F.: Nervous conditions following accident, with special reference to head injury. In: Practitioners (The) library of med. and surgery. 9:439-474, 1936.
53. KLEIST, K.: Episodische Dämmerzustände. G. Thieme, Leipzig: 1926.
54. LANDIS, C. AND HUNT, W. A.: The startle pattern. Farrar & Rinehart, New York, 1939.
55. LENNOX, W. G. AND COBB, S.: Epilepsy. Williams & Wilkins, Baltimore. Med. Monographs, No. 14, 1928.
56. LEVY, DAVID: Maternal Overprotection. Psychiatry. 1, 2, 3: 1938, 1939, 1940.
57. LEVY, DAVID: Studies in Sibling Rivalry. Res. Monog. Amer. Orthopsych. Assn. 1937.
58. LEWIS, T.: Soldiers Heart and the Effort Syndrome. London, 1918-1940.
59. MACCURDY, J. T.: Epileptic Dementia. Psychiat. Bull., 1916.

17. DUNBAR, H. F.: Psychoanalytic Notes relating to Syndromes of Asthma and Hay Fever. *Psychiat. Quart.* 7:25-68, 1938.
18. EDER, M. D.: War Shock. W. Heineman, London, 1917.
19. FEDERN, P.: Das Ich als Subjekt und Objekt im Narzissmus. *Int. Z. (ärztl.) Psychoanal.* 15:393-425, 1929.
20. FEDERN, P.: Narzissmus im Ichgefüge. *Int. Z. (ärztl.) Psychoanal.* 13:420-438, 1927. (Trans. *Int. J. Ps-A.*, IX.)
21. FENICHEL, O.: Über organlibidinöse Begleiterscheinungen der Triebabwehr. *Int. Z. (ärztl.) Psychoanal.* 14:45-64, 1928.
22. FENICHEL, O.: Hysterien und Zwangsneurosen. *Int. Ps. Verlag*, 1931. (Trans. *Psychoanalyt Quart.* 1, 2: 1932, 1933 and Norton, 1935.)
23. FENICHEL, O.: Outline of Clinical Psychoanalysis. Norton, New York, 1934.
24. FERENCZI, S.: Psychoanalytische Betrachtungen über den Tic. In: *Bau- steine der Psychoanalyse I*, *Int. Ps. Verlag*, 1927.
25. FERENCZI, S.: Versuch einer Genitaltheorie. *Int. Ps. Verlag*, 1924.
26. FERENCZI, S.: Hysterie und Pathoneurosen. *Int. Ps. Verlag*, 1919.
Translation in *Further Contributions to the Theory and Technique of Psychoanalysis*. Boni & Liveright, New York, 1927.
27. FERENCZI, S. WITH I. HOLLOS: Paralytische Geistestörungen. *Int. Ps. Verlag*, 1922. (Psychoanalysis and the Psychic Disorder of General Paresis. Authorized English translation by Gertrude M. Barnes and Gunther Keil. *Nerv. & Ment. Dis. Pub. Co.*, Washington, 1925.)
28. FERENCZI, S. WITH ABRAHAM, SIMMEL AND JONES: Psychoanalysis and the War Neuroses. *Internat. Psycho-Analytic Press*. No. 2, 1921.
29. FRENCH, T.: Psychogenic Factors in Asthma. *Amer. J. Psychiat.* 96: 87-101, 1939.
30. FREUD, S.: Formulierungen über zwei Prinzipien des psychischen Geschehens. *Ges. Schr. V.* (Trans. in *Coll. Papers*, IV, 13.)
31. FREUD, S.: Neurose und Psychose. *Ges. Schr. V.* (Trans. in *Coll. Papers*, II, 250.)
32. FREUD, S.: Zur Einführung des Narzissmus. *Ges. Schr. VI.* (Trans. in *Coll. Papers*, IV, 30.)
33. FREUD, S.: Triebe und Tribschicksale. *Ges. Schr. V.* (Trans. in *Coll. Papers*, IV, 60.)
34. FREUD, S.: Die Verdrängung. *Ges. Schr. V.* (Trans. in *Coll. Papers*, IV, 84.)
35. FREUD, S.: Das ökonomische Problem des Masochismus. *Ges. Schr. V.* (Trans. in *Coll. Papers*, II, 255.)
36. FREUD, S.: Jenseits des Lustprinzips. *Ges. Schr. VI.* (Trans. by Hub- back: *Beyond the Pleasure Principle.*)

37. FREUD, S.: Das Ich und das Es. Ges. Schr. VI. (Trans. by Riviere: The Ego and the Id.)
38. FREUD, S.: Hemmung, Symptom und Angst. Ges. Schr. XI.
39. FREUD, S.: Dostojewski und die Vätertötung. Almanach d. Psa., 1930.
40. FRISCH, F.: Epilepsie. Z. ges. Neurol. Psychiat. 103:243-255, 1926.
41. GOLDSTEIN, KURT: The Organism. Am. Bk. Co., New York, 1939.
42. GRAVEN, P.: Die aktive analytische Behandlung der Epilepsie. Fortschritte der Sexualwissenschaft und Psa. Vol. I. Leipzig und Wien.
43. GRUHLE, H.: Epilepsie. Art. in Bumke's Handb. d. Psychiatrie, 1930.
44. HOFFMAN, R. W.: Die reflektorischen Immobilisationszustände im Tierreich. In Bethe's Handb. d. Physiol., XVII, 690-713.
45. HUDDLESON, J. H.: Accidents, neuroses and compensation. Foreword by J. R. Hunt, Williams and Wilkins, Baltimore, 1932.
46. ISCHLONDSKY, N. E.: Der bedingte Reflex. Berlin u. Wien: Urban & Schwarzenberg. (In his Neuropsychie u. Hirnrinde.), 1930.
47. JELLIFFE, S. E.: Nervous diseases following accidents. Accidental injuries to the nervous system with special reference to the traumatic neuroses. Repr. from Schweitzer on Trial Manual for Negligence Actions. Baker, Voorhis & Co., New York, 1937.
48. JONES, E.: Psychoanalysis. Ed. 3. Wood, New York, 1928, pp. 513-521.
49. KARDINER, A.: The Bio-analysis of the Epileptic Reaction. Psychoanalyt. Quart. 1: No. 3-4, 1932.
50. KATZ, D. Der Aufbau der Tastwelt. Barth, Leipzig: 1925.
51. KEIBEL, F. AND MALL, F.: Handb. d. Entwicklungsgeschichte d. Menschen. Vol. II. Leipzig: Hirzel, 1910.
52. KENNEDY, R. F.: Nervous conditions following accident, with special reference to head injury. In: Practitioners (The) library of med. and surgery. 9:439-474, 1936.
53. KLEIST, K.: Episodische Dämmerzustände. G. Thieme, Leipzig: 1926.
54. LANDIS, C. AND HUNT, W. A.: The startle pattern. Farrar & Rinehart, New York, 1939.
55. LENNOX, W. G. AND COBB, S.: Epilepsy. Williams & Wilkins, Baltimore. Med. Monographs, No. 14, 1928.
56. LEVY, DAVID: Maternal Overprotection. Psychiatry. 1, 2, 3: 1938, 1939, 1940.
57. LEVY, DAVID: Studies in Sibling Rivalry. Res. Monog. Amer. Orthopsych. Assn. 1937.
58. LEWIS, T.: Soldiers Heart and the Effort Syndrome. London, 1918-1940.
59. MACCURDY, J. T.: Epileptic Dementia. Psychiat. Bull., 1916.

60. MACCURDY, J. T.: A clinical study of epileptic deterioration. *Psychiat. Bull. N.Y. St. Hosp.*, pp. 187-274, 1916.
61. MASSINI, L. C.: Traumatic Neurosis; evaluation in legal medicine and in invalidity insurance. *Arch. Antrop. crim.* 59:502-508, 1939.
62. McDUGALL, W.: *Outline of Abnormal Psychology*. Schribner's & Sons, New York, 1926.
63. MCGRAW, M. B.: *Growth; a study of Johnny and Jimmie*. Appleton-Century, New York, 1935.
64. MILLER, E., ET AL: *The Neuroses in War*. London, 1940.
65. MONAKOW, C. V.: *Gefühl, Gesittung u. Gehirn*. Zürich: Arb. aus. dem anat. Inst., 1916. (The Emotions, Morality and the Brain. Authorized translation by Gertrude Barnes and Smith Ely Jelliffe. Nerv & Ment. Dis. Pub. Co., Washington, 1925.
66. MONAKOW, C. V.: *Über Lokalisation der Hirnfunktionen*. Wiesbaden: J. F. Bergman, 1910.
67. MÜLLER, L. R.: *Die Lebensnerven*. Ed. 3. Berlin: Springer, 1929. The third edition has the title *Lebensnerven u. Lebenstrieb*, 1931. The second edition appeared 1924 as *Die Lebensnerven*.
68. MURPHY, GARDNER AND LOIS AND NEWCOMB, T. M.: *Experimental Social Psychology*, 1931.
69. MURRI, A.: *Über die traumatischen Neurosen*, 1913.
70. MUSKENS, L. J. J.: *Epilepsie*. Springer, Berlin, 1926. In *Monographien a. d. Gesamtgeb. d. Neur. & Psych.*, H. 47.
71. MUSKENS, L. J. J.: *Epilepsy*. Bailliere, Tindall & Cox, London, 1928.
72. O'BRIEN, J. F.: *Epilepsy or hysteria; a study of convulsive seizures and unconscious states in one hundred ex-service men*. *Boston med. surg. J.* 192:103-107, 1925.
73. OPPENHEIM, H.: *Lehrb. d. Nervenkrankheiten*. Ed. 6, Berlin: Karger, 1913.
74. PFISTER, O.: *Schockdenken u. Schockfantasien bei höchster Todesgefahr*. Int. Ps. Verlag, 1931.
75. REICH, W.: *Die Funktion des Orgasmus*. Int. Ps. Verlag, 1927.
76. REICH, W.: *Über den epileptischen Anfall*. *Int. Ztschr. f. Ps.* XVIII, 1931.
77. REIK, T.: *Der Schrecken*. Int. Ps. Verlag, 1929.
78. RIBBLE, M. A.: *Instinctive Reactions in New-born Babies*. *Amer. J. Psychiat.* 95:149-160, 1938.
79. RIVERS, W. H. R.: *Instinct and the Unconscious*. University Press, Cambridge, 1924.
80. ROSETT, J.: *The Mechanism and Fundamental Cause of the Epilepsies*. *Arch. Neurol. & Psychiat.* 9: 689-738, 1923.

81. ROSETT, J.: The Epileptic Seizure. Arch. Neurol. Psychiat. 21:731-794, 1929.
82. SARGENT, W. AND SLATER, E.: Acute War Neuroses. Lancet, 2:1-2, 1940.
83. SCHILDER, P.: Über den Wirkungswert psychischer Erlebnisse. Arch. Psychiat. Nervenkr. 70:1-15, 1923.
84. SCHILDER, P.: Entwurf einer Psychiatrie auf psychoanalytischer Grundlage. Int. Psychoanalyt. Verlag, 1925. (Trans. by Bernard Glueck: Introduction to a Psychoanalytic Psychiatry. Nerv. & Ment. Dis. Pub. Co., Washington, 1928.)
85. SCHILDER, P.: Das Körperschema. Springer, Berlin, 1923.
86. SIMMEL, E.: Kriegsneurosen u. psychische Traumata. München und Leipzig: Nimmich, 1918.
87. STEKEL, W.: Der epileptische Symptomenkomplex und seine Behandlung. Fortschr. Sexualw. Psychoan. 70:1, 1923.
88. UEXKÜLL, J. V.: Umwelt und Innenwelt der Tiere. Springer, Berlin, 1921.
89. WILSON, S. A. K.: Modern Problems in Neurology. Wood, New York, 1929.
90. WITTKOWER, E. AND SPILLANE, J. P.: Neuroses in war. Brit. med. J. 1:223-225, 1940.

NOTE ON THE LITERATURE

The above bibliography is not even a fragment of the literature on traumatic, war, and industrial neuroses. A complete bibliography would itself fill a volume. I have not read or digested even a portion of this literature. In this I appreciate the risk taken. I have, however, depended on bibliographies compiled by others and am quite confident that no significant contribution has been overlooked. The author of a treatise on a subject has the privilege of making recommendations to the reader who would like to pursue aspects not covered in his work. In this spirit I recommend the following: W. H. R. Rivers, *Instinct and the Unconscious*, for an introduction to an effort to think about the meaning of this syndrome; J. H. Huddleson, *Accidents, Neuroses and Compensation*, as the best general summary of the subject up to 1932; and S. E. Jelliffe's article in Schweitzer's *Trial Manual for Negligence Actions*. For problems in the current war, and new experiments in therapy Emanuel Miller's volume (1940) is the best.

A. K.

INDEX

- Abraham, K., v, 137
Abreaction, 216
Acoustic irritability, 41, 96
Action syndrome, 6, 140, 169, 170
 function of, 179
 meaning in relation to, 179
 receptor, coordinator and effector
 constituents, 179
 relations of, 204
 structure of, 170, 174, 177-182
Action systems, 100
Adaptation, 88
 alterations in, 81
 definition of, 141
 disorganized, 73
 in war, 72
 qualitative changes, 80
Adaptive patterns
 development of, 142
Adler, L., 167 n.
Aggression, 82, 96, 97, 116
 guilt in relation to, 109
 in relation to disorganization, 132
 organized forms of, 100
 outbursts of, 61, 63, 97, 108, 187
Alexander, F., vii, 160, 171, 190,
 196, 203
Allergies, 196, 197
Amaurosis, 29
 transient, 106
Amblyopia, 29
Amnesia
 rôle of, 88
 technique of overcoming, 102
 treatment of, 220, 224, 225, 226
Anosmia, 29
Anxiety, 145
 as a variable, 86
 free-floating, 160
 in dream life, 51
 inhibitory effect of, 157
 in relation to ego organization, 111
 in relation to frustration, 169
 in traumatic neuroses, 51
Aphonia, 31
Arteriosclerosis, 77
Association
 as synthetic principle, 137
Asthma, 190, 191, 195
Attention, 74, 145
Aura, 43, 44, 46, 50, 51, 66
Autonomic disturbances 82, 171
 clinical forms of, 21
 in relation to emotional conflicts,
 190
 in traumatic neurosis, 189
Autonomic system
 functions of, 158, 159
 relation to instinct, 158
 relation to voluntary, 158
Awtokratow, 69
Behavior
 as source material, 135
Bernfeld, S., 147, 148, 149, 152 n.,
 153
Bieber, I., 160, 190
Binswanger, O., 29, 30
Body ego, 151, 152, 194
 arrests in development of, 175
 in relation to utility, 113
 loss of sensation, 113

- Bonhoeffer, K., 119
 Brain tumor, 78
 Bratz, 119
 Cannon, W. B., 143, 192 n.
 Castration complex, 5
 Character changes in traumatic neurosis, 115
 Civilian morale, 230
 Clark, L. P., 120
 Claustrophobia, 12, 14
 Cobb, S., 190
 Comic, 88 n.
 Compensation, 70, 98, 209, 216, 217, 236, 237, 239
 Compulsive rituals, 84
 Conative principle, 139, 205
 Concussion syndrome, 4
 Conditioning, 137
 Confabulation, 40
 Constructs, 135
 Contagiousness of traumatic neuroses, 39
 Convalescent dreams, 91, 209
 Course of traumatic neurosis, 209, 210
 Crichton-Miller, H., 231, 232
 Curiosity, 179
 Daniels, G. E., 190
 Deafness, 31
 Death instinct, 136, 188
 Defensive ceremonials, 15, 16, 17, 18, 19, 20, 21
 Delirious states, 40, 60
 Dependency, 172
 Depersonalization, 161
 Dermographia, 39
 Destructiveness, 149, 157, 176, 183
 Deutsch, F., 190
 Differential diagnosis
 dreams as, 214
 hypnosis as, 213
 traumatic neurosis, of, 212-215
 Dillon, F., 217
 Direct experience, 135, 199
 Discharge phenomena, 87, 111
 Disorganization, 112
 normal, fatigue as, 163
 Displacement phenomena, 33, 87, 178, 195
 Dreams
 annihilation, of, 90, 91, 92, 110, 185, 209
 anxiety in, 51
 as differential diagnosis, 214
 convalescent, 209, 91
 frustration, of, 90
 guilt, of, 92-94
 in epilepsy, 129, 130
 in traumatic neurosis, 57, 89-109
 wish fulfillment in, 185
 Dunbar, H. F., vii, 160, 171, 190, 196, 203
 Eczema
 traumatic, 192
 Eder, M. D., 29, 31
 Effective ego, 160
 functions of, 161, 171
 Effort syndrome, 213
 Ego
 contraction of, 183, 184
 integrative character of, 160
 Ego function
 development of, 131-176
 impairment of, 122-132
 relation of anxiety to, 111
 Ego instincts, 138
 Electroencephalogram, 215, 242
 Epilepsy
 dream life in, 129, 130
 post-war, 69
 relation to traumatic neurosis, in, 117

- theories of, 118-132
- Epileptic symptom complex, 36, 41
in acute stages, 36
- Eros (life instinct), 136
- Executive organs, 147
- Explanations, 135
- Failure reactions, 160
- Fascination, 153, 154
- Fatigue, 74, 75, 162, 171
and traumatic neurosis, 169
as normal disorganization, 163
definition of, 164
in infants, 163
- Fenichel, O., vii, 139
- Ferenczi, S., v, 137, 150, 167
- Fixation, 72, 82, 87 175
- French, T., 160, 171, 190, 191, 196
- Freud, S., v, 94, 121, 122, 136, 137, 160, 174, 195
- Fright, 95, 96, 146, 163, 179
- Fright reactions, 145
- Frisch, F., 118
- Frustration, 139, 172
anxiety in relation to, 169
dreams of, 90
- Fugue, 106
- Gait, disturbances of, 30
- Gastric ulcer, 190, 191
- Gaupp, 21, 27, 40
- Graves' disease, 21, 25, 26
- Guilt
dreams of, 92-94
in relation to aggression, 109
- Hadfield, J. A., 219, 235
- Hibernation, 167
- Hospital organization for treatment, 228
- Hypertension, 190, 191, 192, 196
- Hypnosis
in differential diagnosis, 213
in treatment, 218
- Hypochondriasis, 7, 8
- Hysteria, contrast of traumatic neurosis with, 193
- Identification, 152, 154, 173
- Imitation, 152, 154, 173
- Impotence, 13, 98, 99
- Inhibition, 80, 81, 85, 97, 98, 173, 178, 179, 181, 198
chronic effects of, 181, 182
consequences of, 182
contrast to uninhibited activity, in, 200
manifestations of, iii
meaning, as modified by, 182
pain, in relation to, 150, 177
partial, 162
repression in relation to, 100
rôle of intelligence in, 152
work, to, 98, 107
- Instinct
as a conative principle, 137
as an operational concept, 5, 6, 136, 169, 194
executive, 136
in traumatic neurosis, 178
relation of autonomic system to, 158
self-preservation, of, 138
somatic source, 136
- Integration, 137
- Integrative processes, 144
- Intelligence, 152
- Interest, 179
- Internal environment, 157, 170, 193
in infancy, 159
- Irritability, 82, 83, 95, 96, 98, 160, 163, 203
acoustic, 41, 96

- relation to aggression, 98
- Ischlondsky, N. E., 155
- James-Lange theory, 159
- Jelliffe, S. E., 119
- Jones, E., v, 137
- Kelman, H., vii
- Kessel (and Hyman), 21, 26
- Kinaesthetic sensations, 151, 156
- Kirby, G. H., vii
- Kleist, K., 119
- Landis, C., 144
- Laughter, 145
- Lethargic states, 37
- Levy, D. M., 173
- Lewis, T., 202, 213
- Libido stasis, 160
- Libido theory, 137, 194
- Liddell, H. S., vii
- MacCurdy, T., 90
- McDougall, W., v, 115, 116
- McGraw, M. B., 173
- Malingering, 215
- Masochism, 178, 186, 187, 188
 - as ego organization, 186
 - contrast to traumatic neurosis, in, 187
 - sexual, 187
- Mastery, 187
 - definition of, 142
 - development of, 146
 - incomplete, 175
 - modalities of, 142
- Masturbation, 173
- Meaning
 - alteration of, 184
 - as modified by inhibition, 182
- Meyer, A., vii
- Monakow, C. V., 143
- Moro reflex, 144
- Mucous colitis, 190, 191
- Müller, L. R., 158
- Murphy, G., 173
- Murri, A., 211
- Muskens, L. J. J., 118
- Mutism, 31, 85
- Myelination, 143
- Narcolepsy, 37
- Need tension, 143
- Neurasthenia, 165, 166
- Night blindness, 29
- Obsessional neurosis, contrast of traumatic neurosis with, 193
- Oedipus complex, 122, 194
- Operational concept, 135
 - instinct as, 5, 6, 136, 169, 194
- Oral mastery, 149, 183
- Orientation,
 - development of, 144
- Pain, 75
 - in relation to inhibitions, 150, 177
- Paraesthesias, 33
- Paralyses, 30
- Passivity, 183
- Pathoneurosis, 7, 8
- Pawlow, I., 168
- Personnel for treatment, 229
- Phobias in traumatic neuroses, 50
- Photophobia, 29
- Physioneuroses, 193-198
 - clinical types, 196
- Pleasure principle, 199, 201
- Pre-traumatic personality, 172
- Prognosis in traumatic neurosis, 211, 212
- Prophylaxis, 230
- Psychodynamics of traumatic neurosis, 177-205

- Rado, S., vii
 Reality testing, 179
 Reflexology, 147, 153
 Regression, 100, 157, 175
 Reich, W., 160
 Repetition compulsion, 189
 Repression, 162, 175, 184, 201
 in relation to inhibitions, 100
 in traumatic neurosis, 101, 182
 Ribble, M., 144
 Rivers, W. H. R., v
 Rohrschach test, 242
- Schilder, P., 93, 120, 121, 147, 154,
 155, 161
 Schizophrenia, 9, 10
 Secondary gain, 209
 Security, as goal, 161
 Self-confidence, 172, 177, 179,
 205 n
 Self-preservation, 4
 as instinct, 138
 Sensory-motor disorders, 29, 84
 Shell shock, 69
 Shock psychosis, 39
 Simmel, E., v, 137, 219
 Skill, 174, 179
 Skull fracture, 76
 Sleep, 162
 as inhibitory process, 171
 conditions of, 167
 interpretations of, 166, 167
 Stammering, 23, 31
 Startle pattern, 144, 215
 Stasis phenomena, 171, 190
 Stekel, W., 93, 120
 Sweating, disturbances of, 33, 39
 Sublimation, 115, 174
 Super-ego, 139, 174, 175
 Syncopal phenomena, 83, 84
- Tarachow, S., 160, 190
- Theory, requirements of, 135
 Tics, 15, 82
 Transference neurosis, 177
 incidental to war, 10, 11, 12, 13,
 14, 15
 Trauma
 consequences of, 179, 180, 181
 definition of, 74, 79
 war in relation to, 68, 69
 Traumatic neurosis
 and fatigue, 169
 anxiety in, 51
 autonomic disturbances in, 189
 character changes, 115
 clinical forms of, 7-67
 conception of, organic, 4
 conception of, psychogenic, 4
 conception of, psychoanalytic ex-
 planations, 5
 constant features of, 86
 contagiousness of, 39
 contrast with hysteria and obses-
 sional neurosis, 193
 course of, 209, 210
 differential diagnosis, 212-215
 dream life, 57, 89-109
 epilepsy, in relation to, 117
 instinct in, 178
 masochism in contrast to, 187
 nosology, 137, 193
 of peace time, 70
 Parkinsonian facies, 54
 phobias in, 50
 physioneurosis, as, 196
 predisposition to, 172, 176, 230
 prognosis in, 211, 212
 psychodynamics of, 177-205
 relation to epilepsy, 117
 repression in, 101, 182
 sexual impotence in, 13, 98, 99
 spontaneous recovery of, 209, 210
 treatment of, 216-232

- Treadway, W., vii
- Treatment, as re-education, 220
 hospital organization for, 228
 hypnosis in, 218
 of traumatic neurosis, 216-232
- Tremors, 99
- Twilight states, 37
- Utility, 161
 function, 112, 141, 156, 161,
 174, 188
 value, 112
- Vertigo, 49, 54, 56, 57, 83, 98, 99,
 114
- Visual fields, contraction of, 29
- Vocational re-education, 238
- Voluntary motion, 156
- War, in contrast to peace-time
 activity, 70, 71
 in relation to trauma, 68, 69
- War of nerves, 231
- Wilson, K., 118
- Work, psychology of, 93
 inhibitions, 98, 107

MONOGRAPHS

Volume I

- I. Benjamin V. White, Stanley Cobb and Chester M. Jones:
Mucous Colitis—A Psychological and Medical Study
of Sixty Cases\$2.00
- II., III. Abram Kardiner: The Traumatic Neuroses of War
.....\$3.00
- IV. Thomas M. French and Franz Alexander: Psychogenic
Problems in Bronchial Asthma, Part I\$2.00

Volume II

- I. Thomas M. French and Franz Alexander: Psychogenic
Problems in Bronchial Asthma, Part II\$3.00

Monographs in Preparation

Ronald E. Scantlebury and Thomas L. Patterson: Ex-
perimental and Comparative Studies in Psychophysi-
ology.

W. Horsley Gantt: The Origin and Development of
Behavior Disorders in Dogs.

Ephraim Shorr and George W. Henry: Psychic Con-
comitants of the Ovarian Insufficiency.

Howard S. Liddell, O. D. Anderson, Richard Parmenter
and George F. Sutherland: Comparative Physiology of
Experimental Neuroses.

Therese Benedek and Boris B. Rubenstein: Relation of
Ovarian Function and Emotional States.

Pauline A. and Hallowell Davis: The Electroencephalo-
gram and Its Implications.

MONOGRAPHS

Volume I

- I. Benjamin V. White, Stanley Cobb and Chester M. Jones;
Mucous Colitis—A Psychological and Medical Study
of Sixty Cases\$2.00
- II., III. Abram Kardiner: The Traumatic Neuroses of War
.....\$3.00
- IV. Thomas M. French and Franz Alexander: Psychogenic
Problems in Bronchial Asthma, Part I\$2.00

Volume II

- I. Thomas M. French and Franz Alexander: Psychogenic
Problems in Bronchial Asthma, Part II\$3.00

Monographs in Preparation

Ronald E. Scantlebury and Thomas L. Patterson: Ex-
perimental and Comparative Studies in Psychophysi-
ology.

W. Horsley Gantt: The Origin and Development of
Behavior Disorders in Dogs.

Ephraim Shorr and George W. Henry: Psychic Con-
comitants of the Ovarian Insufficiency.

Howard S. Liddell, O. D. Anderson, Richard Parmenter
and George F. Sutherland: Comparative Physiology of
Experimental Neuroses.

Therese Benedek and Boris B. Rubenstein: Relation of
Ovarian Function and Emotional States.

Pauline A. and Hallowell Davis: The Electroencephalo-
gram and Its Implications.

THE TRAUMATIC NEUROSES OF WAR—Kardiner

Psychosomatic Medicine Monograph II-III

PSYCHOSOMATIC MEDICINE MONOGRAPH II-III

THE TRAUMATIC NEUROSES OF WAR

BY

ABRAM KARDINER, M.D.

FORMERLY ATTENDING SPECIALIST
U. S. VETERANS HOSPITAL NUMBER 81

FORMERLY INSTRUCTOR IN PSYCHIATRY
CORNELL UNIVERSITY

AND

ASSOCIATE IN PSYCHIATRY
COLUMBIA UNIVERSITY

• 1941 •

PUBLISHED WITH THE SPONSORSHIP OF THE
COMMITTEE ON PROBLEMS OF NEUROTIC BEHAVIOR
DIVISION OF ANTHROPOLOGY AND PSYCHOLOGY
NATIONAL RESEARCH COUNCIL, WASHINGTON, D.C.